Remote Surveillance System

iView

User's Manual

Model: LJ-738

Version 1.4

2005

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Chapter 1: Introduction

Section 1. Features

iView is a unique remote video surveillance system which consists of a compact stand-alone web-server and a PAN & TILT USB PC Camera. It can be accessed from anywhere in the world via a standard browser (IE/Netscape) by entering the IP, account and password. Each system can simultaneously support any two combinations of USB PC cameras be it regular or pan-tilt. With its built-in web-server, **iView** can stream video images directly to the Internet without a computer. **iView** features a Windows-based software that allows the user to archive streaming video directly into the hard-drive. The same software also allows the user to monitor multiple cameras on one screen.

Web Server Features:

- 10/100Mbps fast Ethernet network access
- Support any Java-Enabled Web Browser (IE/Netscape)
- LCD display shows the IP address, Subnet Mask and Gateway
- 32-Bit RISC CPU
- 1MB Flash Memory
- 8MB Dynamic Memory
- Support Up to 30 simultaneous remote viewers for each camera
- Allow Up to 8 User Accounts and Passwords with different access levels
- 5.3V DC 1A Maximum
- Operating Temperature: 0°C ~ 60°C
- Operating Humidity: 10% ~ 90%
- Dimensions: 48mm x 63mm x 21m Weight: 75g
- For Indoor Use. Protective housing required for Outdoor Use
- Network Protocol: HTTP, TCP/IP, UDP, SMTP, PPPoE, Dynamic DNS, DNS Client, SNTP, BOOTP, DHCP, FTP, SNMP
- Support All USB PC Camera with VIMICRO ZC0301 Plus processor built-in
- Resolution: 640 x 480, 320 x 240, 160 x 120.
- Frame Rate: Up to 20fps in 320 x 240
- MJPEG Compression
- 2 USB Ports for PC Cameras
- USB 1.1 & 2.0 compliant
- Can combine with 2 different PC Cameras

USB PC Camera (Model: LJ-738) Features

- ✓ Color CMOS VGA Sensor with 380,000 pixels
- ✓ PAN range 320°, TILT range 60°, Speed 90° per second
- ✓ Resolution: 640x480, 320x240, 160x120
- ✓ 320x240 MJPEG Compression
- ✓ Up to 25 frames per second
- ✓ Focus Distance: 5cm to infinity, Adjustable Focus Lens
- ✓ View Angle: 56°
- ✓ Auto Control: White Balance, Exposure, Color/Brightness
- ✓ USB 1.1 Interface

Section 2. iView as a Remote Surveillance System

Once **iView** is installed, the user can check any of the connected PC cameras using a standard web browser. The user can monitor and control these cameras simply by entering the IP address (set-up required with iView Utility) of the **iView** from anywhere in the world as long as there is an Internet connection available.
For instance, the user can be in Paris but is able to monitor his factory production in China and if he likes checks on his branch office located in Singapore, all this simultaneously.

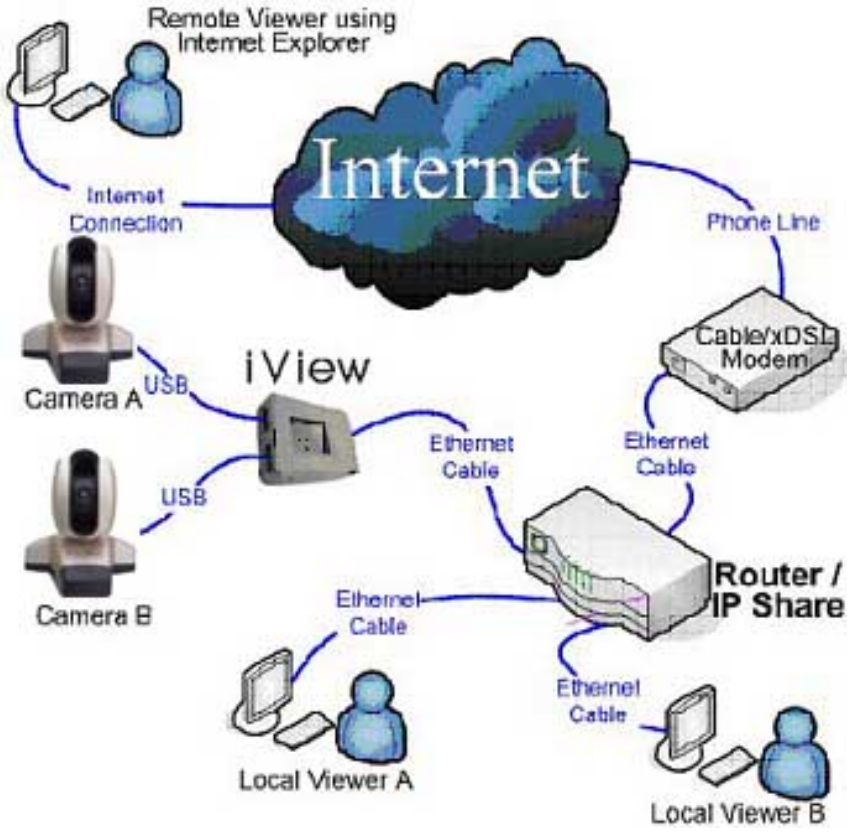


Fig.1 **iView** Network Diagram

Section 3. Package Contents

Your iView package should contain the following items:

1. iView Web Server,
2. PAN & TILT USB PC Camera
3. iView Application CD, which contains;
   a. iView Utility: to configure IP address, update the firmware, etc.
   b. IP2Cam MultiView Utility : Windows platform to monitor multiple iView.
   c. User's Manual (pdf)
   d. USB PC Camera Driver (install only use as a standalone webcam)
4. 5.3V DC Adapter
5. 1 meter Ethernet Cable (RJ45)

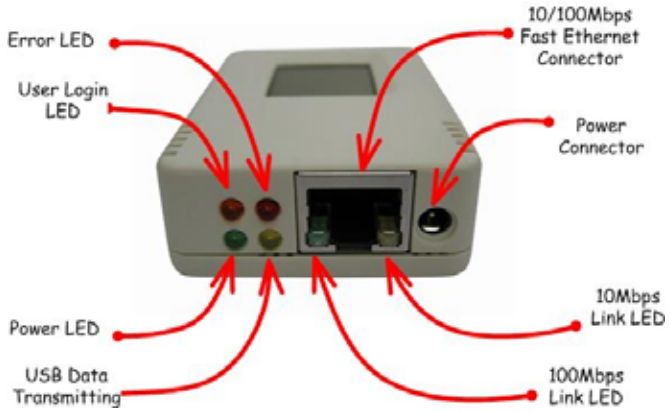


Fig.2 iView Front View

Fig.3 iView Back View

LED Status Indicators on iView		
Light color	**Signal definition**	**Condition description**
Green	Power state	On: Normal power
Red	Error Condition	On: Error condition occurred
Orange	Logon state	On: When there is user logon receive the image
Yellow	USB data activity	Flash when there is data transmit/receive on the USB

Fig.4 **iView** Status LED Indicators

Light indicators on iView LAN Port LED	
Light color	**Condition description**
Green	**On:** Internet correspond speed is 100M **Flash:** Data transmitting/receiving
Yellow	**On:** Internet correspond speed is 10M **Flash:** Data transmitting/receiving

Fig.5 **iView** LAN LED Indicators

Chapter 2: Installation Procedure

Before you start using **iView**, you will need to set-up both the hardware and software. The following is a flow chart on the installation procedure:

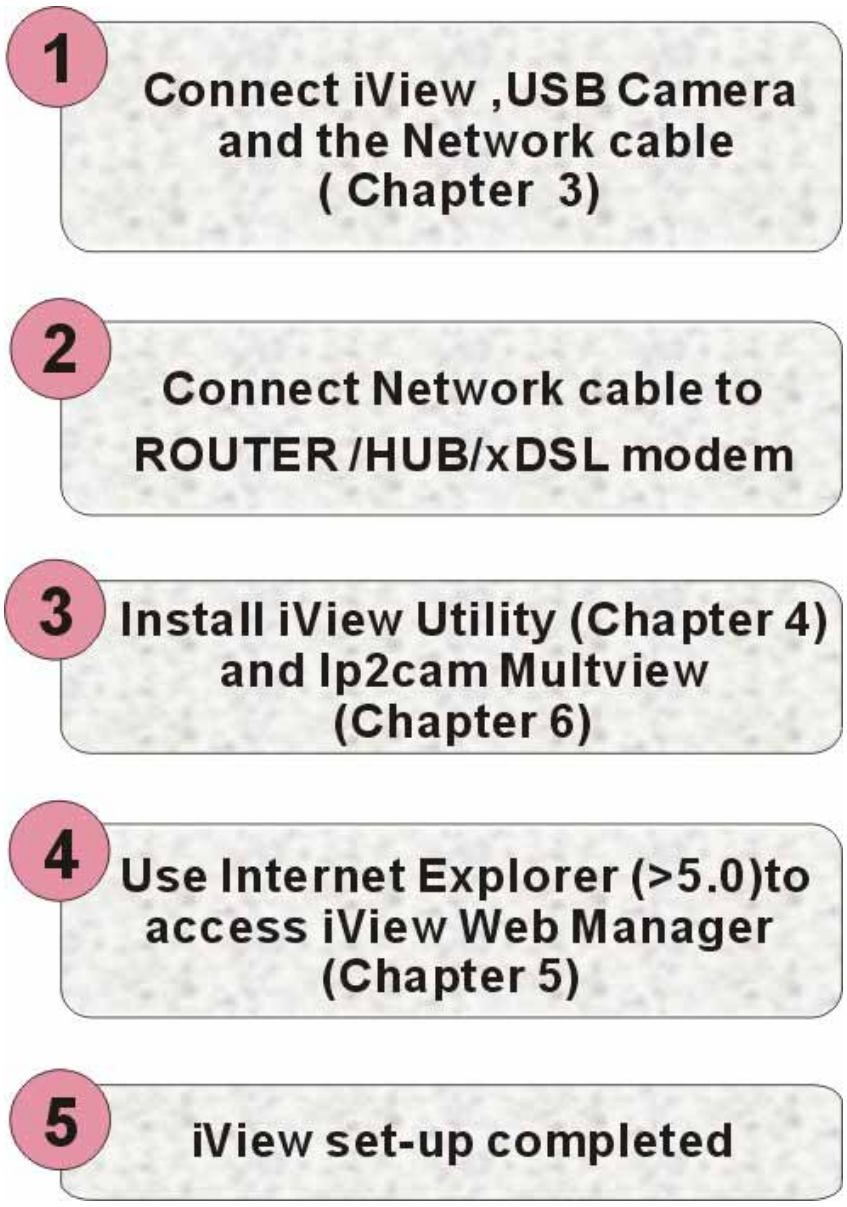

1
Connect iView ,USB Camera and the Network cable (Chapter 3)
2
Connect Network cable to ROUTER /HUB/xDSL modem
3
Install iView Utility (Chapter 4) and Ip2cam Multview (Chapter 6)
4
Use Internet Explorer (>5.0)to access iView Web Manager (Chapter 5)
5
iView set-up completed

Fig.6 iView installation flowchart

Chapter 3: iView, USB Camera and the Network

The following details the installation procedure for iView.

Section 2. iView Web Server Installation Procedure

Step 1:

Connect the PC Camera into the USB port of iView Web Server.

Step 2:

Connect the iView Web Server to LAN by using the Ethernet UTP port.

Step 3:

Connect DC power adapter output into iView Web Server socket, and plug the DC power input into the wall socket

Step 4:
The LCD will display the IP, Subnet Mask and Gateway IP. Use a WEB browser to login into the iView IP address. The icon on the LCD shows that a USB camera is connected.

If two USB cameras are connected, the LCD display will show

Warning:
Please make sure the input Voltage and Frequency of the DC power adaptor (DC 5.3V) is correct before plugging into the power outlet!

Chapter 4: Using iView Utility to Setup IP & Update Firmware

Section 1. Installing iView Utility

1. Insert the enclosed iView Application CD into the CD-ROM drive.
2. Select and open the "iView Utility" folder
3. Run "iViewVUT-install.exe"

iView Utility - This is a program that helps the user perform quick installation. It will detect the current configuration and take the user thru the necessary network setup.

a. Click the button to commence installation.

b. After installation is completed, iView Utility group will appear in Windows 'Start' 'Program Group'

c. A iView Utility icon will also appear on your Window desktop

d. Click this to start the program

Fig.7 iView Utility Group

IP2cam MultiView - This is a window-based program designed to allow user to control a large number of iView located either in a LAN or on a WAN.

User's Manual - Click to read iView's User's Manual. You will need Adobe Acrobat Reader v5.0 or higher.

Section 2. Using iView Utility

When you start up iView Utility, the iView Utility main menu is shown below. The selection menu is located on the left. The Serial Number, current Firmware and IP Address of every iView connected to the LAN will be displayed on the table to the right.

Fig.9 iView Utility Main Menu

2.1 Setup Wizard

Use “Setup Wizard” to take you thru the basic configurations necessary to start using iView.

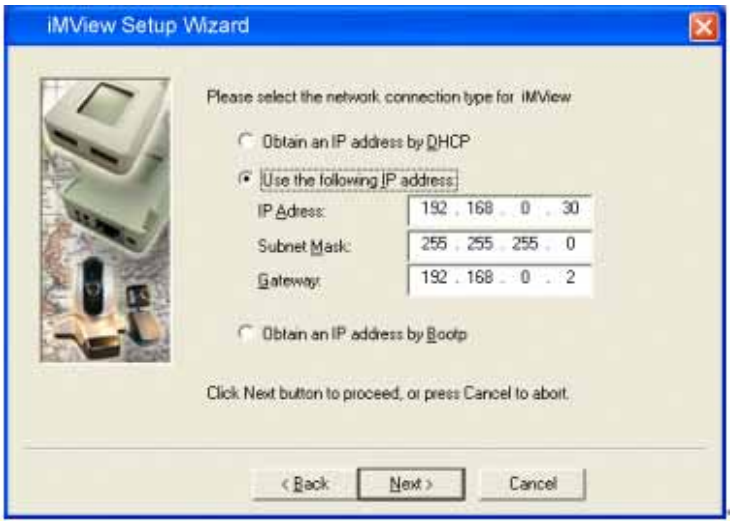
1. Click to highlight the iView on the right that you want to configure.

2. Click on “Setup Wizard”.

3. iMView Setup Wizard will initiate to take you thru the installation.

4. Enter the necessary camera configurations. Choose the appropriate frequency (Indoor 60 Hz, Indoor 50 Hz or Outdoor) to prevent flickering on the video feed. Enter a name for the camera in the “Location” box to easily identify it.

5. Click “Next >” to configure the Network Connection.


iMView Setup Wizard
Please select the network connection type for iMView
Obtain an IP address by DHCP
Use the following IP address:
IP Adress:
192 . 168 . 0 . 30
Subnet Mask:
255 . 255 . 255 . 0
Gateway:
192 . 168 . 0 . 2
Obtain an IP address by Bootp
Click Next button to proceed, or press Cancel to abort.
< Back
Next >
Cancel

"Use the following IP Address"

Enter an appropriate internal IP Address, Subnet Mask and Gateway for iView (Refer to Appendix B for an explanation of IP Addresses)

"Obtain an IP address by DHCP"
Choose this if you do not know your basic Network Configurations

"Obtain an IP address by Bootp"
Allow iView to obtain an IP address using Bootp protocol.

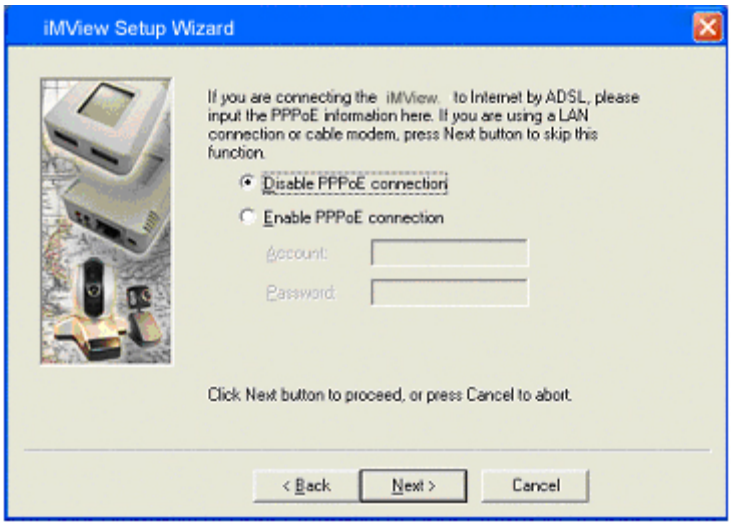
6. Click "Next >" to proceed to xDSL/Cable modem setup.

This section has to be configured to allow iView to access the Internet through an xDSL.

iMView Setup Wizard
If you are connecting the iMView to Internet by ADSL, please input the PPPoE information here. If you are using a LAN connection or cable modem, press Next button to skip this function.
Disable PPPoE connection
Enable PPPoE connection
Account:
ABCD
Password:
Click Next button to proceed, or press Cancel to abort.
< Back
Next >
Cancel

Select "Enable PPPoE connection" and enter your account and password details as provided by your ISP.

Otherwise, leave it at the default "Disable PPPoE connection"


iMView Setup Wizard
If you are connecting the iMView to Internet by ADSL, please input the PPPoE information here. If you are using a LAN connection or cable modem, press Next button to skip this function.
Disable PPPoE connection
Enable PPPoE connection
Account:
Password:
Click Next button to proceed, or press Cancel to abort.
< Back
Next >
Cancel

7. Click “Next >” to proceed with DDNS setup or registration

iMView Setup Wizard
You can register with a DDNS service to locate the iMView Internet. If you have already subscribed to one of the providers listed assigned domain name, user name and password. Otherwise, please choose one from the drop-down list and follow the URL link below.
Service Provider:
None
Domain Name:
User Name:
Password:
Click Next button to proceed, or press Cancel to abort.
< Back
Next >
Cancel

iMView Setup Wizard
You can register with a DDNS service to locate the iMView Internet. If you have already subscribed to one of the providers listed assigned domain name, user name and password. Otherwise, please choose one from the drop-down list and follow the URL link below.
Service Provider:
dyndns.org
Domain Name:
User Name:
Password:
For detailed information and to subscribe to dyndns.org, please go to http://www.dyndns.org/
Click Next button to proceed, or press Cancel to abort.
< Back
Next >
Cancel

You will need to setup this section if you are using a Dynamic IP

If you do not already have a Domain Name registered with your ISP, select from one of the 4 Free DDNS service providers (3322.org, dhs.org, dyndns.org or myddns.org). Follow the link to the respective free service providers to register a Domain Name and obtain a User Name and Password. Enter these details in the boxes provided

***However, we recommend you skip this setup at this stage and use “None” as default Service Provider. You can always come back to this DDNS setup later after registration with DDNS service providers.

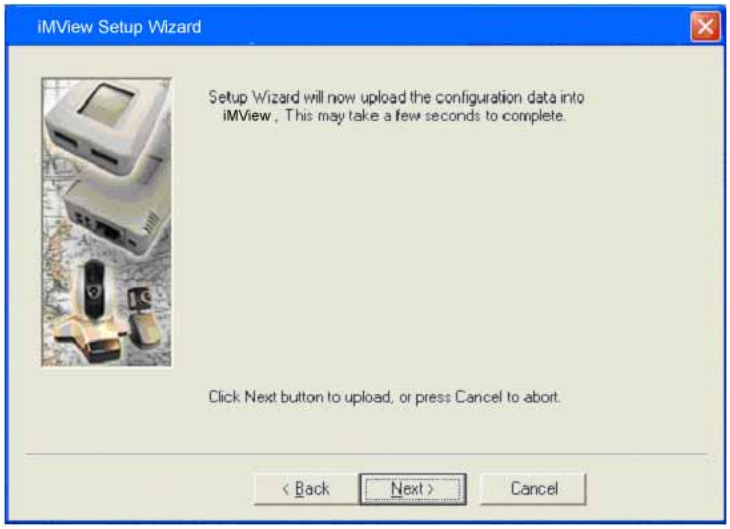
8. Click “Next >” to create an administrator account and password.

iMView Setup Wizard
To ensure privacy, please set the following administrator account and password to iMView Note: If this is left empty, iMView can be accessible and viewed by the
Account:
ABCD
Password:
WARNING: Do not lose the administrator account and password. Once set, you will not be able to configure iMView without the administrator account and password.
Click Next button to proceed, or press Cancel to abort.
< Back
Next >
Cancel

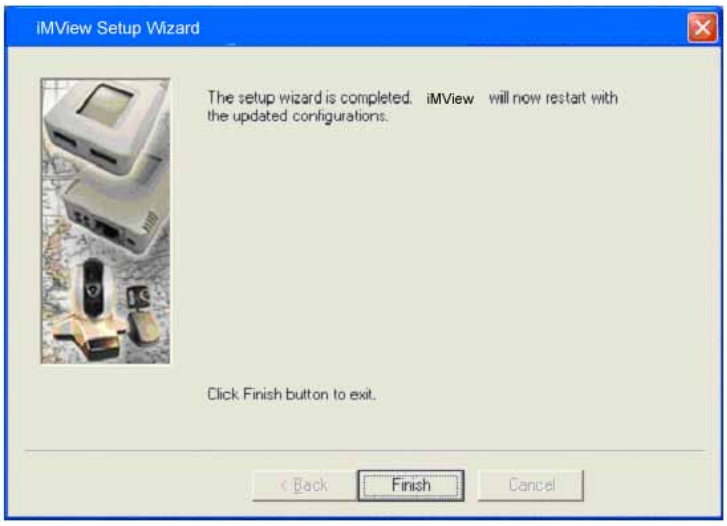
An administrator account is necessary to ensure privacy. If you do not set one, iView can be viewed by anyone on the web.

WARNING: Do not lose the administrator account and password. Once set, you will not be able to configure iView without the administrator account and password.

9. Click “Next >” to upload these configurations to iView.

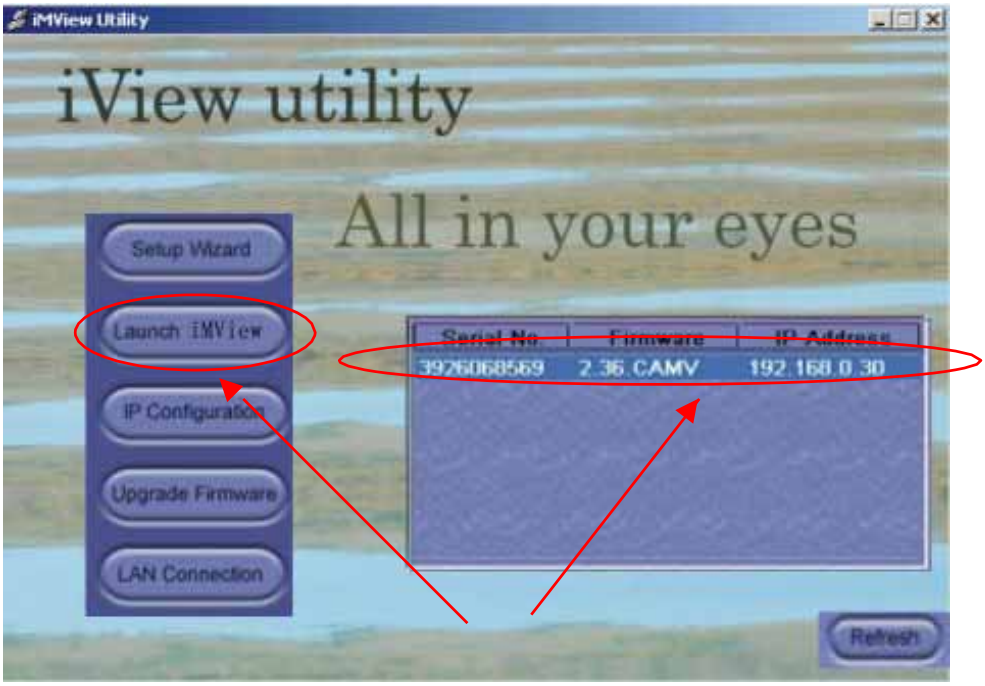

iMView Setup Wizard
Setup Wizard will now upload the configuration data into iMView , This may take a few seconds to complete.
Click Next button to upload, or press Cancel to abort.
< Back
Next >
Cancel

10. Click “Next >” to save and restart iView with the new configurations.


iMView Setup Wizard
The setup wizard is completed. iMView will now restart with the updated configurations.
Click Finish button to exit.
< Back
Finish
Cancel

2.2 Launch iMView

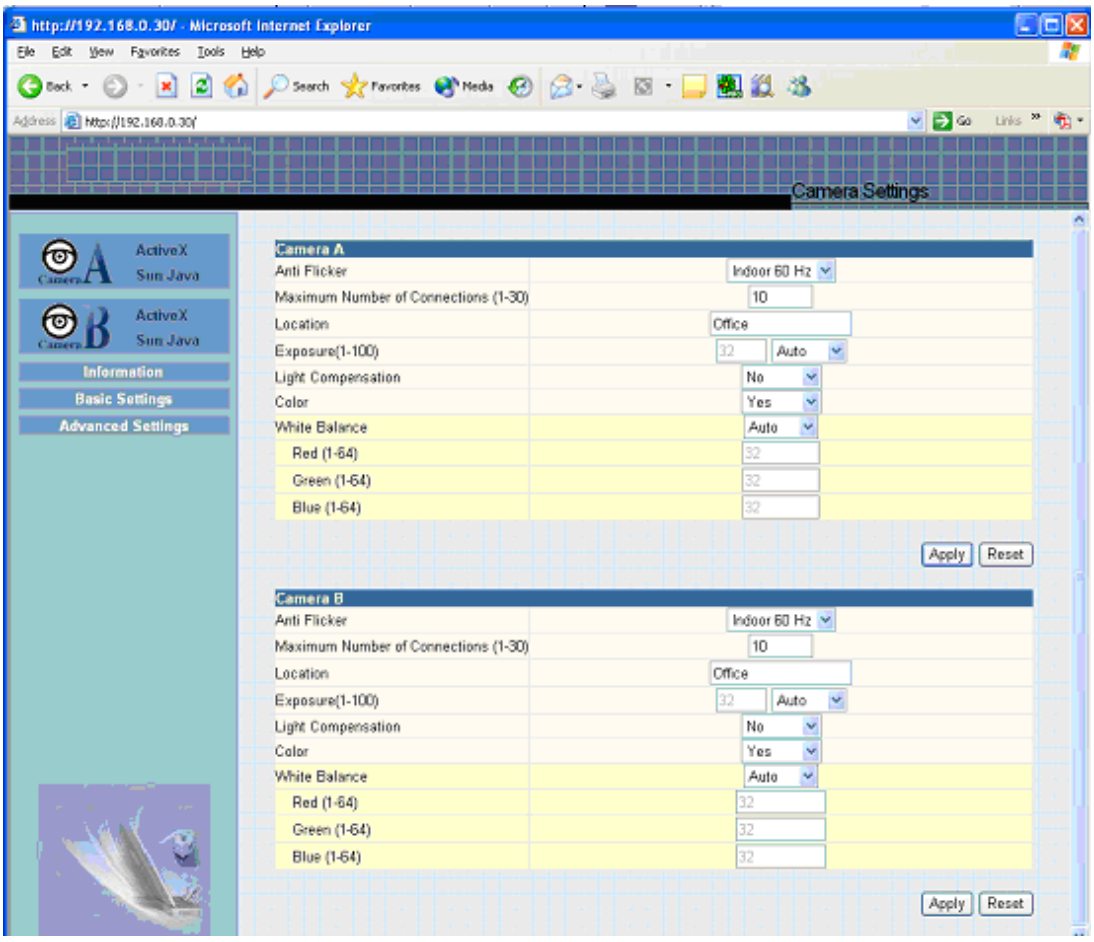
Once you have finished with the above Setup Wizard, either Click “Launch iMView” OR double click on the iView listed on the table to launch it.



Click either to Launch iView.

Once you have done the above, the iView login screen will appear.
Key in the administrator account number and password entered earlier (if you did not input one, then just press ENTER or click on the “OK” button).

The iView webpage will appear. Click ActiveX for Camera A to view the video images. (Please make sure your PC has ActiveX installed already)



2.3 IP Configuration

This section allows you to determine IP address configuration for iView.

Select the iView on the right display screen, and then click “IP Configuration”. This will bring up the IP Address Configuration window. There are two tabs:

- IP Address
- Advanced (for port setting configuration)

2.3.1 IP Address

Use this section to set the IP Address of iView.

When using iView for the first time, it is advisable to choose the "Using Static IP Address" option. For this option, the user will have to enter an IP Address, Subnet Mask and Gateway of their choice (refer to Appendix B for IP address explanation).

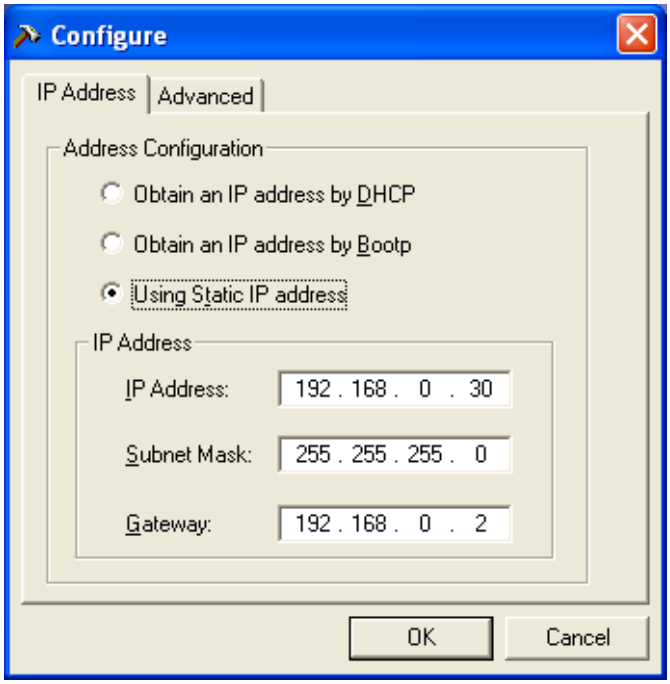


Fig.10 IP Configuration: Set an IP Address for iView

Once the IP Address is set, you will be able to connect to iView Webpage by entering this IP Address into a standard browser.

"Obtain an IP address by DHCP or BOOTP"

The IP address, Subnet Mask and Gateway is acquired directly and assigned automatically by the system.

2.3.2 Advanced

This section sets security password against unauthorized access to devices thru iView Utility.

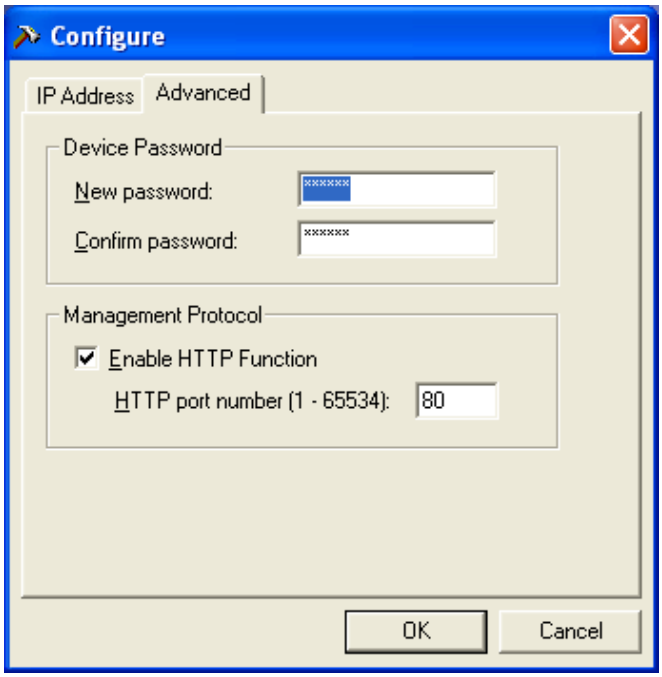


Fig.11 IP Configuration: iView Advanced settings

i. Device Password

Use this to set an access password to the individual device. Once set, the user must enter the password to access the device. In addition, the IP Address will not be shown on the right display panel of iView Utility.

iView Utility will request for the “Input Device Password” when you click either “Setup Wizard”, “Launch iView” or “IP Configuration”

WARNING:
Do not lose this password. If the password is lost, you can not access the device
To make changes.

To remove the password, you must first enter a valid “Input Device Password”, go to “Device Password” and delete the entries, click “OK”.

ii. Management Protocol

The administrator can determine the parameter settings when providing access via HTTP (web) to iView. For security reasons, the administrator can choose to use either an open or advanced port setting to control these accesses.

The default values are set to port number 80 for HTTP.

Once the HTTP port number is set to another port (other than 80), the full IP Address must be entered in order to access the Website.

For example:

* If a value of 61 is set as the HTTP port number, then http://192.168.0.177:61 must be entered as the IP address in order to access iView website.

Uncheck to disable this function.

2.4 Upgrade Firmware

iView Utility offers a convenient method to upgrade iView firmware.

1. Click “Upgrade Firmware” to bring up the Wizard.

iMView Setup Wizard
The following step by step procedure will help you download the latest firmware and upgrade it into iMView Please follow the procedures step by step. Press Cancel to abort the procedure.
Upgrade the iMView firmware with file saved on the local hard
Browse...
Click Next to check for latest firmware or Cancel to abort.
< Back
Next >
Cancel

Fig.12 Upgrade Firmware: Updates iView firmware

If you have downloaded the latest firmware to your local hard drive, check "Upgrade the iView firmware with file saved on the local hard drive" and browse to the file location.

2. Click "Next >" to check for the latest available firmware.

3. Select new firmware file (*.bin) and,

4. Click "Start".

The iView red and yellow LED will flash alternately to indicate that firmware upgrading is in progress. Once completed, iView will reboot.

NOTE:
If the downloading / upgrade process is interrupted or the data is corrupted, iView will keep its default firmware to avoid complete data loss. If this happens, repeat the above firmware upgrade procedure.

2.5 LAN Connection

To switch to another Network Adaptor, click on “LAN Connection”.

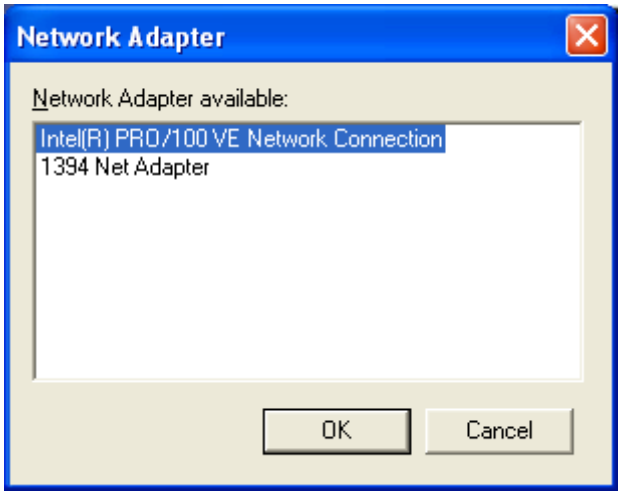


Fig.13 Network Adaptor examined

2.6 Refresh

iView Utility automatically searches for any iView connected to the LAN. However, the user can do a manual search by click the “Refresh” icon located at the bottom right of the menu.

Chapter 5: iView Web Manager

Section 1. Introduction

After you have setup the hardware and set an IP address for iView, you will then be able to go to iView web site to monitor and control the PC cameras. All you have to do is enter the new IP address into any web browser.

1. Start the Web Brower (Netscape or Internet Explorer)

2. Enter the iView IP Address that was set earlier using “Setup Wizard” (e.g. 211.21.67.51), and press ENTER

3. A login screen will appear. Enter the Administrator User Name and Password if you have set these in the “Setup Wizard”. Otherwise, just press ENTER.

Fig.15 iView Login screen

Section 2. iView Web Manager Interface

The iView webpage main menu is divided into two sections. The selection menu on the left and display menu on the right. The selection menu consists of the following options:

2.1 Web-Camera Selection
2.2 Information
2.3 Basic Settings
2.4 Advanced Settings

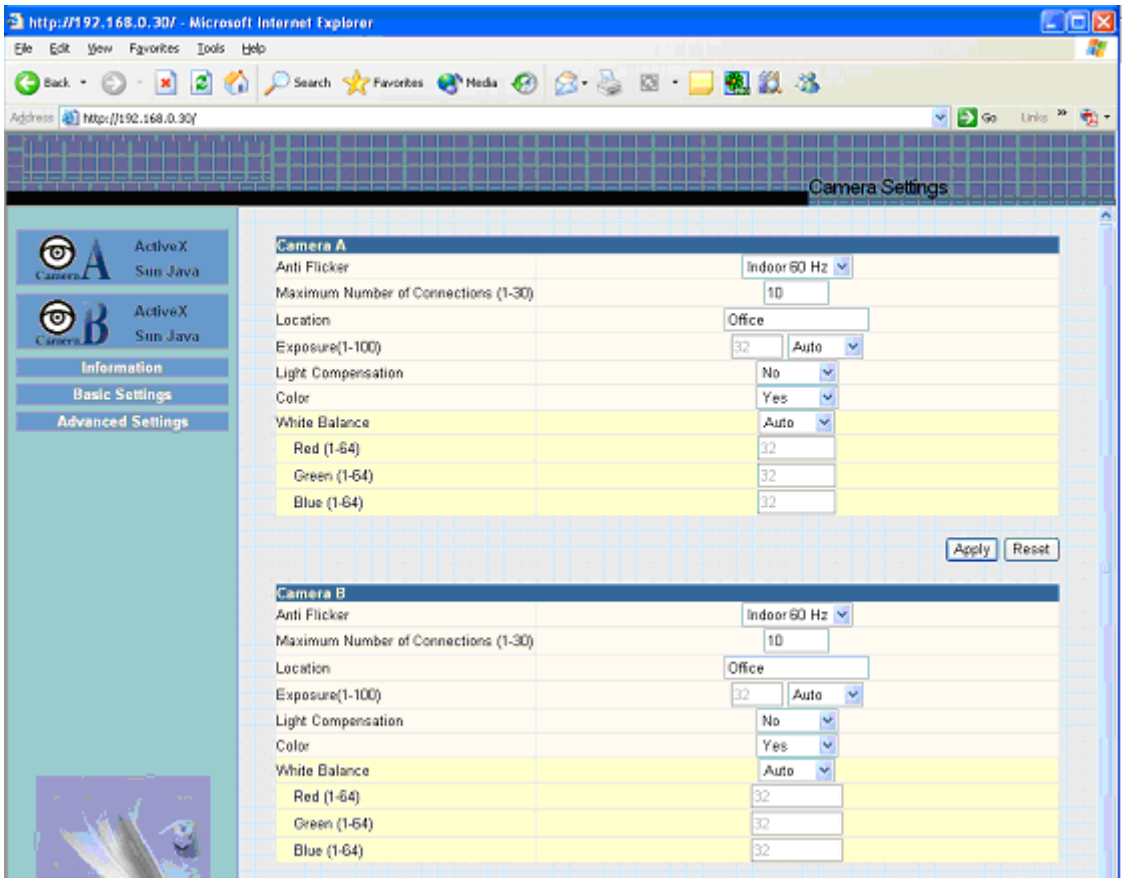


Fig.16 iView Main Menu

When using iView for the first time, you must set the following to ensure that iView works smoothly;

a. Set the necessary parameters in the “Configuration” menu. In particular, the “Anti Flicker” under “Camera settings should be set to 50Hz or 60Hz (change this to 60Hz or 50Hz /Outdoor if video output continues to flicker)

b. Set the Light Compensation to YES

c. Click “Apply” to confirm the setting every time you change it

d. The USB PC Camera lens is adjusted for best results.

By default the above Camera Settings page is displayed when you login.

2.1 Web-Camera Selection

Click on either “ActiveX” or “Sun Java” from Camera A or B to view the camera images.

By default the first USB camera connected to iView will be denote as “Camera A”

Click “Camera B” to view camera B.

Note: ActiveX can only function on Windows platform and a plug-in has to be installed on the client's computer. If this is prohibited for safety reasons you will have to use Sun Java to view the video feed. Sun Java also allows users who are not using Windows based Operating System to view the video feed.

Once you click on “Camera A” the following image will appear.

Make sure to adjust the USB camera lens for best picture results.

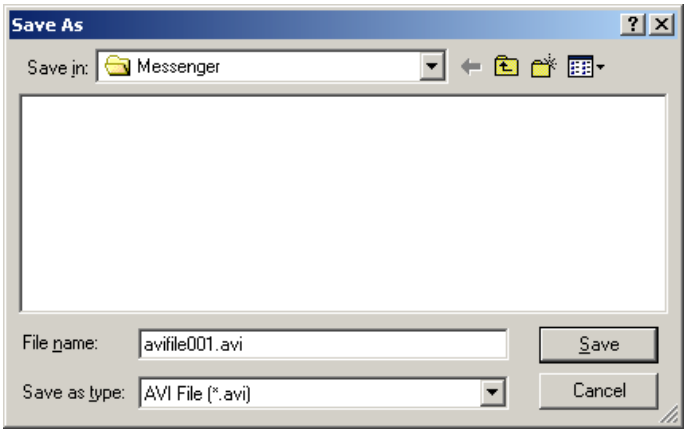
Click on the controls along the Window to control the camera.

Note:
The pan and tilt controls will only work with cameras which have this function built-in.

Click to record the current image to the selected directory.

To change the saved location and filename, click and the “Save As” window will pop up.

Choose an alternate location and filename. Click the “Save” button to confirm changes.



To change Video Codec, click

Note: The availability of Codec depends on weather the individual user has it installed on the PC or not. Download and install Windows MediaPlayer9 to enable MPEG4 codec.

Digital Zoom In, Digital Zoom Out

Rotate Left, Rotate Right

Flip the image vertically.

Auto Pan the camera

Pan Left by 5 deg / Pan Left by 1 deg.

Pan Right by 1 deg / Pan Right by 5 deg.

Tilt Up by 5 deg / Tilt Up by 1 deg.

Tilt Down by 1 deg / Tilt Down by 5 deg.

2.2 Information

The “Information” tab contains the following subsections;

2.2.1 System Status,

2.2.2 Current Connections and

2.2.3 Event Log.

2.2.1 System Status

This section displays all the information relating to iView.

i. System Information

This section shows iView System Information such as the Hardware and Firmware Version, the serial number, current / local System Time, the system name, contact, location and uptime. These values are either provided by iView or set by user.

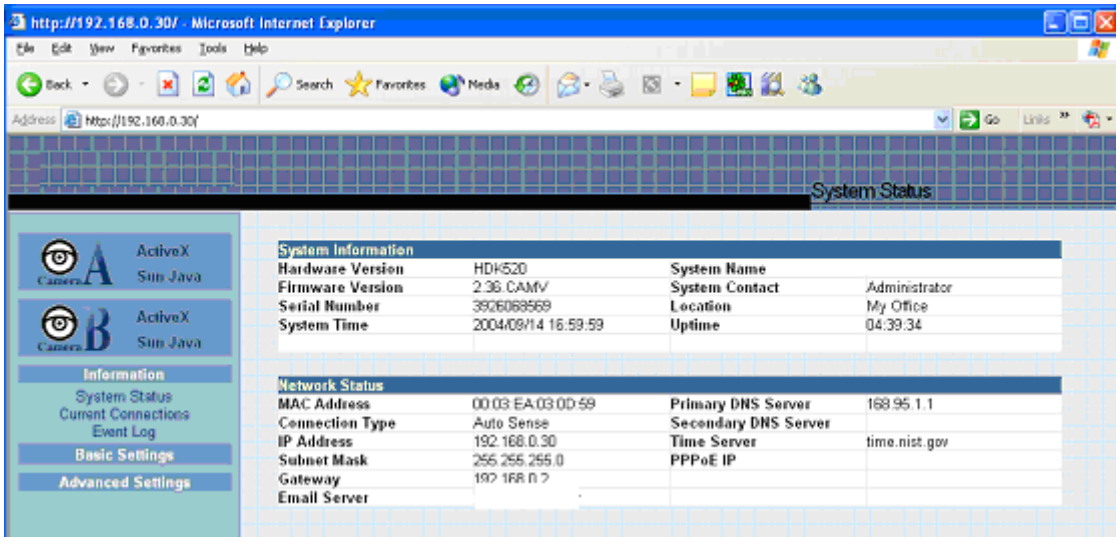


Fig.17 iView System Status

ii. System Information

This section shows iView Network settings. The MAC Address is unique to every iView. All other values are set by the user in Setup Wizard.

2.2.2 Current Connections

This section will show all the users currently viewing either Camera A or Camera B. It also lists, the login time, and total bytes received. The user has an option to block the IP or even disable the account of any errant viewer. The administrator privilege will be required for this feature. A total of 10 connections can be displayed at the same time.

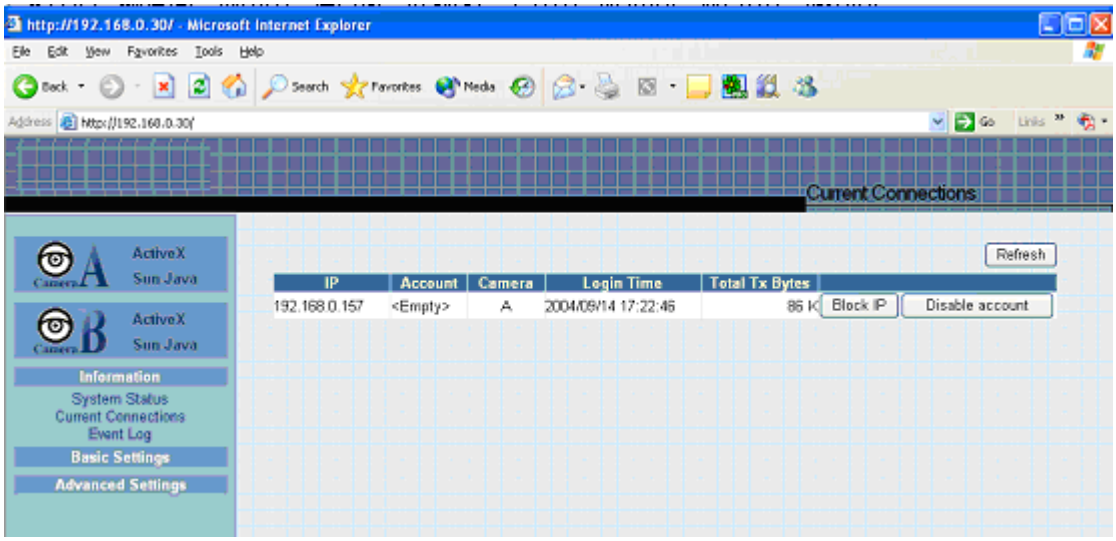


Fig.18 iView Current Connections

2.2.3 Event Log

This section will keep a record of all events that occurred in iView. The user can Refresh, Clear or Save the log file. There is also an option to sort the logs according to “Level” or “Type”

iView can log up to 2,000 events

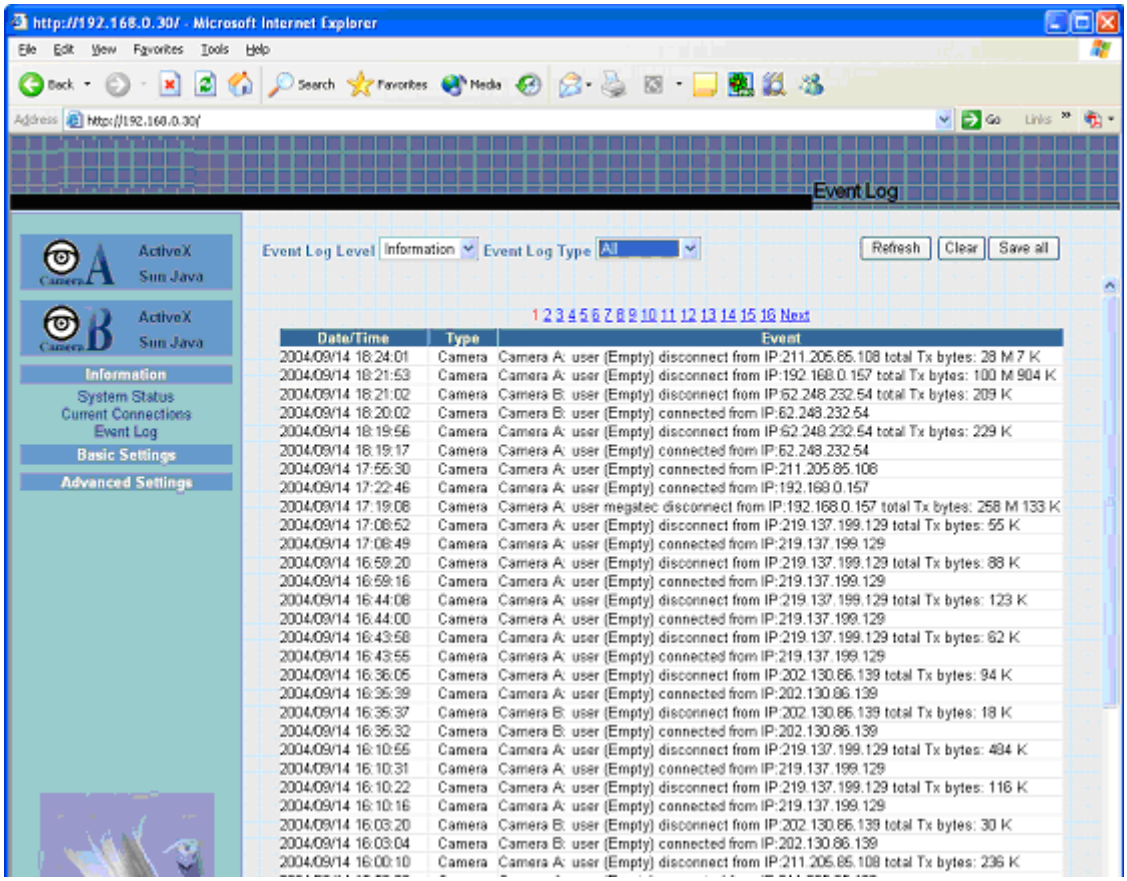


Fig.19 iView Event Log

2.3 Basic Settings

Please ensure that each of the following option is set correctly. Otherwise, iView may not work properly.

2.3.1 Camera Settings
2.3.2 Network
2.3.3 Account Settings

2.3.1 Camera Settings

Use this section to set up the USB camera.

i. Setting up Camera A (Similar with Camera B)

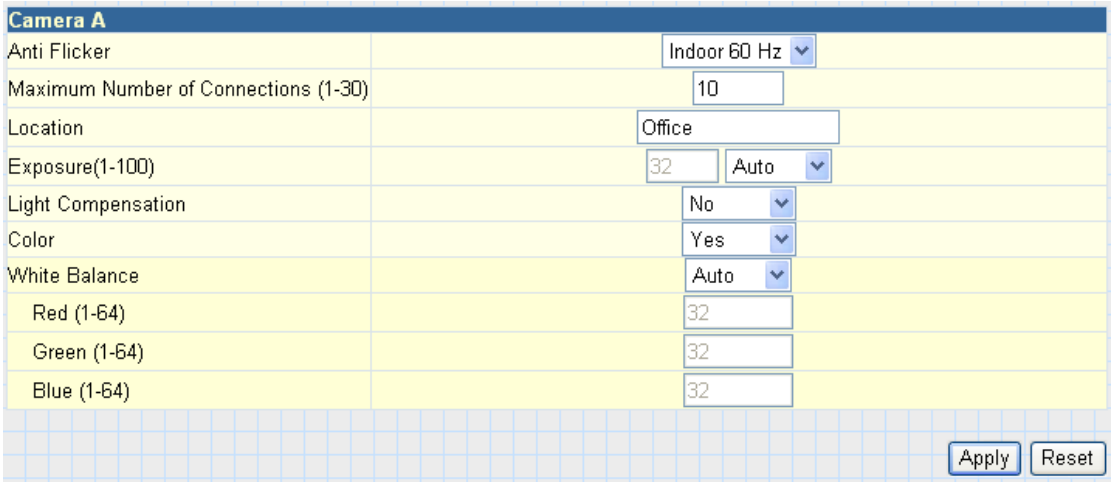


Fig.20 Individual Camera Configuration

" Anti Flicker"

Choose between 50Hz, 60Hz or Outdoors.

Note: If you do not choose the right frequency, the image will flicker or lines will appear on the images

"Maximum Number of Connections (1-30)"

Use this to limit the number of users that can connect to this camera.

"Location"

Enter a suitable location / name for the camera.

"Exposure (1-100)"

Set this to "Auto", or Click "Manual" to fix the exposure.

"Light Compensation"

Choose "Yes" and iView will increase the lighting of the image. This is useful when monitoring indoors.

Choose "No" if you do not want iView to adjust the light and view the images as is.

"Color"

Choose "Yes" for color and "No" for black and white display.

"White Balance"

Choose "Auto" to let iView make auto adjustment. To adjust this manually, select "Manual" from the drop down menu, and then enter a suitable number for Red, Green and Blue.

Click "Apply" to save changes. Otherwise, all changes will be lost.

2.3.2 Network

This option determines the iView Network settings.

i. IP Address

These items were all setup earlier in Setup Wizard. Enter new addresses and click “Apply” to change.

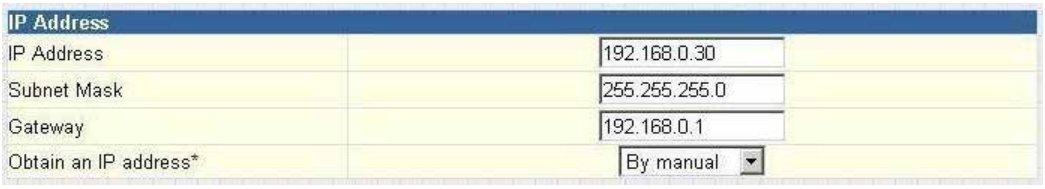


Fig.21 iView IP Address Settings

“IP Address”

This item determines iView IP Address.

“Subnet Mask”

This item sets iView Subnet Mask. The value is normally 255.255.255.0

“Gateway”

This item is to set iView Gateway.

“Obtain an IP address”

This allows the user to choose either to set iView IP Address manually or via DHCP. iView will reboot after the above settings have been changed.

ii. DNS Server IP

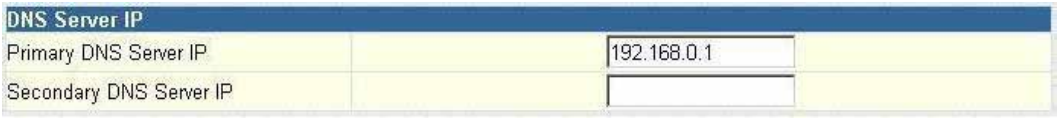


Fig.22 iView IP DNS Server IP

“Primary DNS Server IP”

This item sets iView primary DNS Server IP address.

“Secondary DNS Server IP”

This item sets iView secondary DNS Server IP address. iView will use the secondary DNS Server IP address if the Primary DNS Server IP address is not working.

iii. Port Number

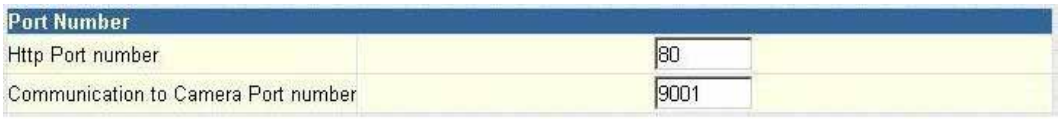


Fig.23 iView Port Settings

“HTTP Port Number”

By default the port number is 80

“Communication to Camera Port Number” By default the port number is 9001

iv. Ethernet

Fig.24 iView Ethernet Settings

"Connection Type"

This item sets the communication speed between iView and the Network. iView will reboot after "Connection Type" is changed.

v. Dynamic DNS

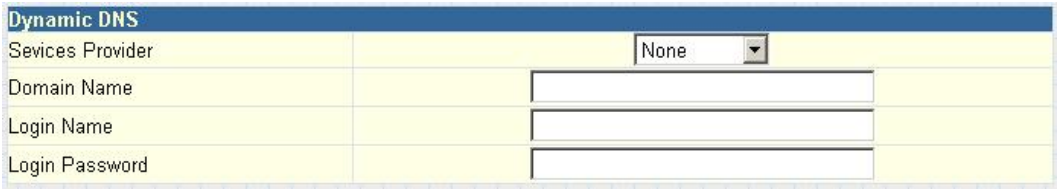


Fig.25 iView Dynamic DNS Settings

"Service Provider"

The iView can be configured to register the current IP to a dynamic DNS provider. This will enable you to locate iView's IP every time the IP changed due to an ADSL connection redial. Before you use this function, you will have to register with either one of these four service providers:

- None (Select this to disable the DDNS function)
- 3322.org
- dhs.org
- dyndns.org
- myddns.com

"Domain Name"

Enter the Domain Name you have created from one of the four websites.

"Login Name"

Enter your login name for the above domain name. You only have to configure once.

"Login Password"

Enter your password. You only have to configure once.

vi. PPPoE

Use this option to allow iView to directly dial-up using your xDSL modem and connect to the Internet. Once set-up, iView will be able to stream the video images directly to the Internet without going thru a IP router.

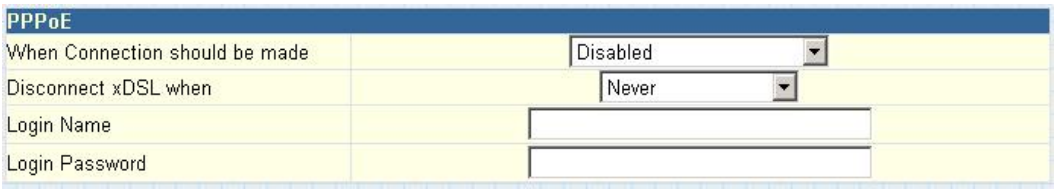


Fig.26 iView PPPoE setting

"When Connection should be made"

The user has a choice of:

Disabled	:	Default setting. iView does not dial in
Connect always	:	iView will automatically dial in.

"Login Name"

Enter your login name

"Login Password" Enter your password

2.3.3 Account Settings

This section allows you to set up to eight (8) user accounts with different permissions for iView.

i. User Account

"User Name"

Determine the username of visitors who can log in. The administrator can set up to 32 case-sensitive character names.

"Password"

Set a password for the visitor's account. The administrator can set up to 32 case-sensitive passwords.

"Permission"

Determine the permission level to one of "Administrator", "Operator", "Viewer" or "No Access"

Administrator:	This permission allows the user full access including write permission to all the sections.
Operator:	This permission level allows the user access to iView menus, but without the permission to amend them. The administrator can also set "Permit Hours" here for seeing camera.
Viewer:	This permission level allows the user to access iView at specific time as set in "Permit Hours" for seeing camera. The user does not have write permission and only access the "Web Cam" and "Information" section.
No Access:	This is to revoke either of the above two permission levels given to a user and make the user account disable.

WARNING:
If you did not setup the Administrator account in Setup Wizard; you **MUST** now set an Administrator permission level **BEFORE** setting either "Operator", "Viewer" or "No Access". Failure to do so will result in you being locked out of iView Web Manager!

"IP Filter"

Visitor can only login from the IP address specified here for security consideration. You can restrict a user access only from 192.168.1.0/24 by setting up "192.168.1.* ". Otherwise, leave it as **"*.*.*.*"** to allow the user to login from any place.

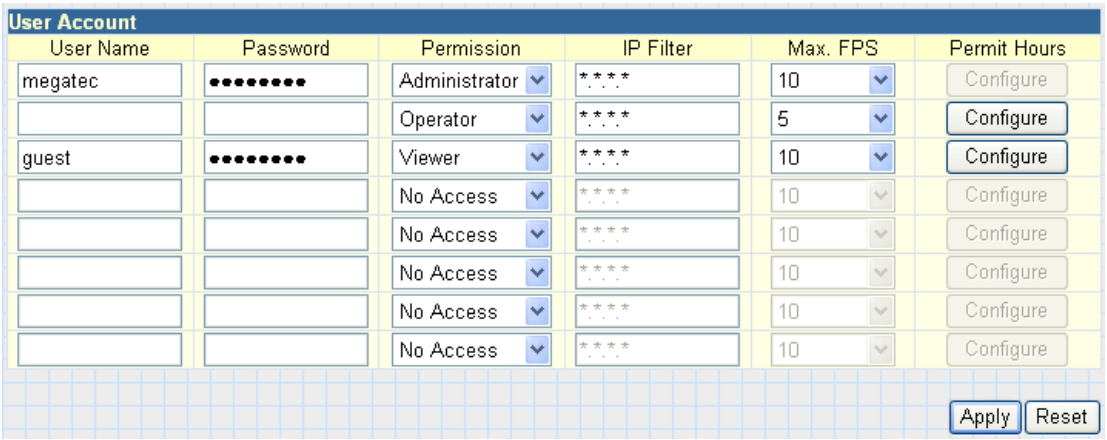


Fig.27 iView User Account Settings

"Max FPS"

This allows the administrator to determine the frames per second ("FPS") allocated to each type of account. By limiting the FPS, the administrator can manage the limited bandwidth available. The administrator can set a figure between 1 to 20 and unlimited FPS.

"Permit Hours"

When the Permission level is set to either "Operator" or "Viewer", the Administrator can configure and determine the time to which either permission level can access the camera.

Click "Configure" to bring up the following window. You can set up to 4 different Permit Hours (in 24hr format). Click "Apply" to save and "Close" to exit.

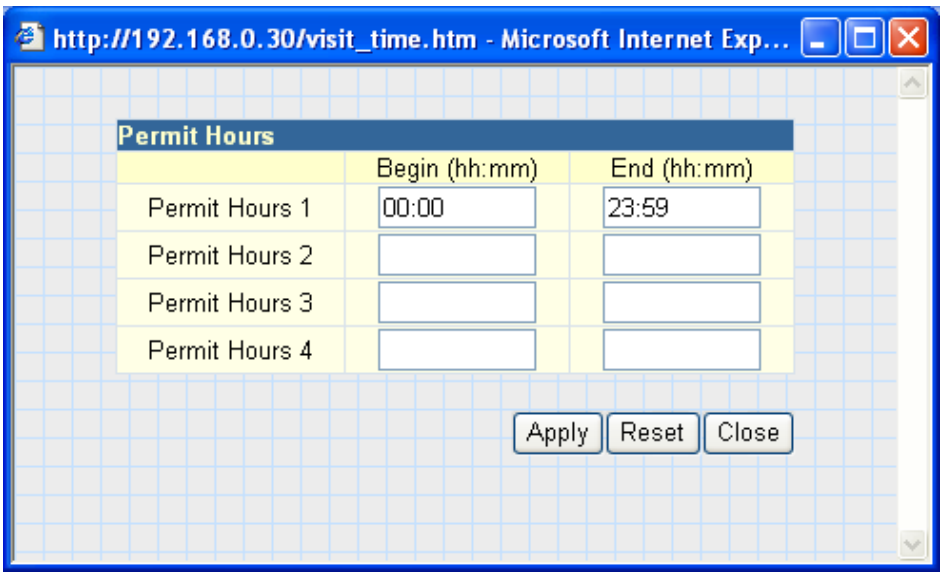


Fig.28 iView Permit Hours Configuration

2.4 Advanced Settings

Please ensure that each of the following option is set correctly. Otherwise, iView may not work properly.

2.4.1 Event Notification

2.4.2 Motion Detection

2.4.3 Image Recording

2.4.4 Email / FTP

2.4.5 System Settings

2.4.6 Language

2.4.7 About

2.4.1 Event Notification

This section determines the type of event an email is sent by iView. iView can send notifications to up to 8 email recipients. Note: You must have Administrator privilege to edit this section.

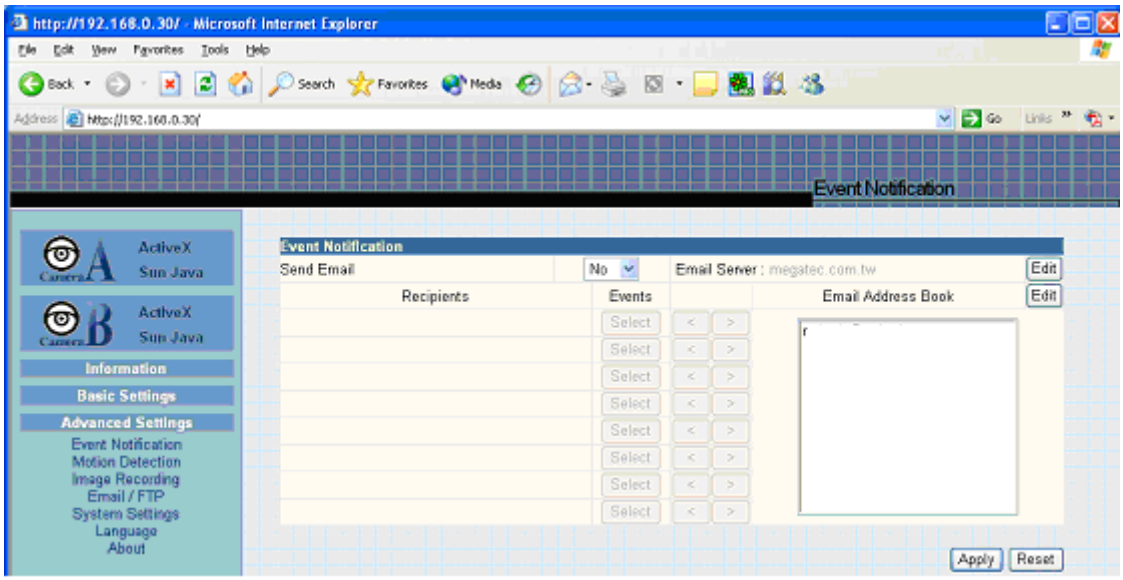


Fig.29 iView Event Notification Page

i. Event Notification

"Send Email"

To activate Event Notification, you will need to set "Send Email" to "Yes". Select "No" if you do not wish to send out any notification.

"Email Server"

A valid "Email Server" with username and password (if authentication is required) must be made available for this feature to work. If you do not have this setup, or wish to change the settings, click on "Edit".

"Email Address Book"

There must be at least one valid email address in the address book. The default email is just a sample. If you wish to add or delete entries in your address book, click "Edit".

"Recipients"
iView can send email notification to up to 8 valid email accounts. To add an email to the recipient list, click <. To remove, click >.

"Events"
This section determines the events that the selected recipients will be notified of by email. There are three types of events, Information, Warning and Error. Click Select to select from the list of events you wish these recipients to be notified of.

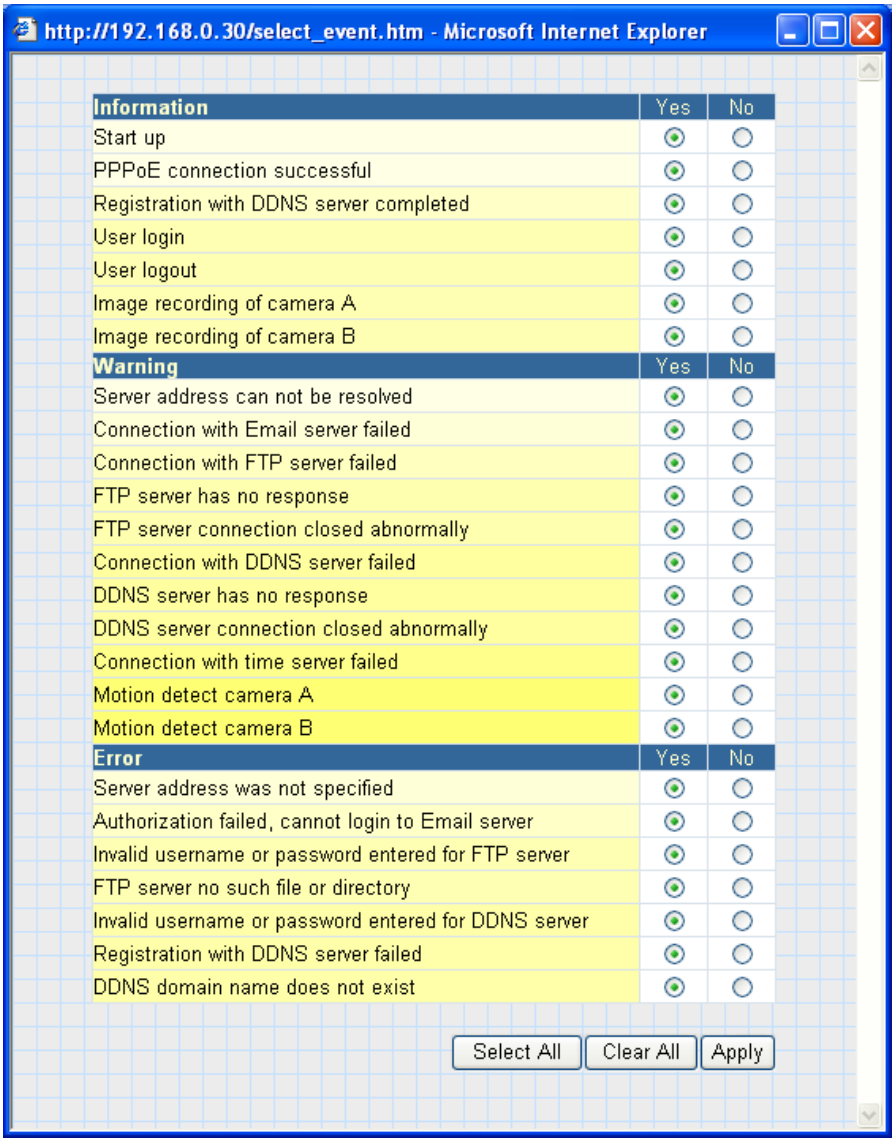


Fig.30 iView Event Selection List

By default, all the events are selected; you must click “Apply” to activate them. Close the window to return to the Event Notification Page. Click “Apply” to save your settings.

iView will send you the following email notification depending on which event you have selected.

Note: The image recording and motion detection notification function here will send an email notification WITHOUT any pictures attached. For email notification with images, the administrator has to setup the Image Recording Page and Motion Detection Page under Advanced Settings.

Samples:

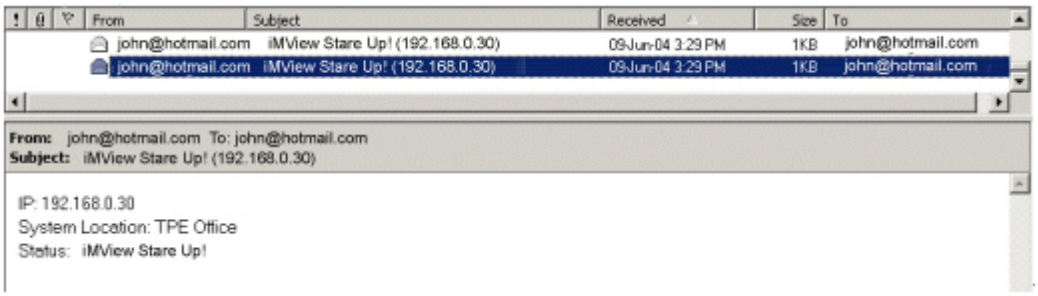


Fig.31 iView Event : Start Up

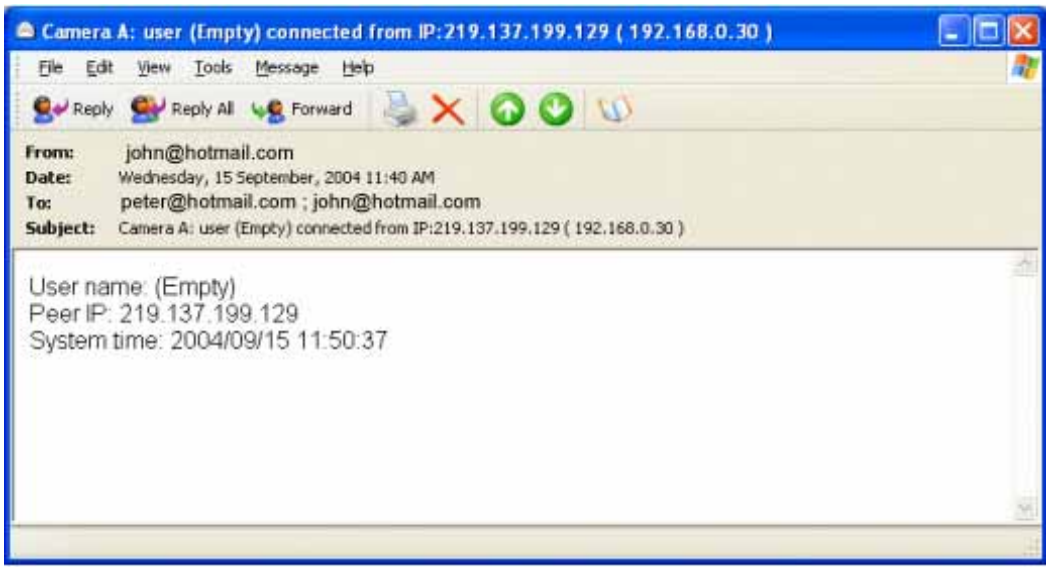

Camera A: user (Empty) connected from IP:219.137.199.129 (192.168.0.30)
File Edit View Tools Message Help
Reply Reply All Forward
From: john@hotmail.com
Date: Wednesday, 15 September, 2004 11:40 AM
To: peter@hotmail.com ; john@hotmail.com
Subject: Camera A: user (Empty) connected from IP:219.137.199.129 (192.168.0.30)
User name: (Empty)
Peer IP: 219.137.199.129
System time: 2004/09/15 11:50:37

Fig.32 iView Event : User Login Details (Date, Time, Camera & IP)

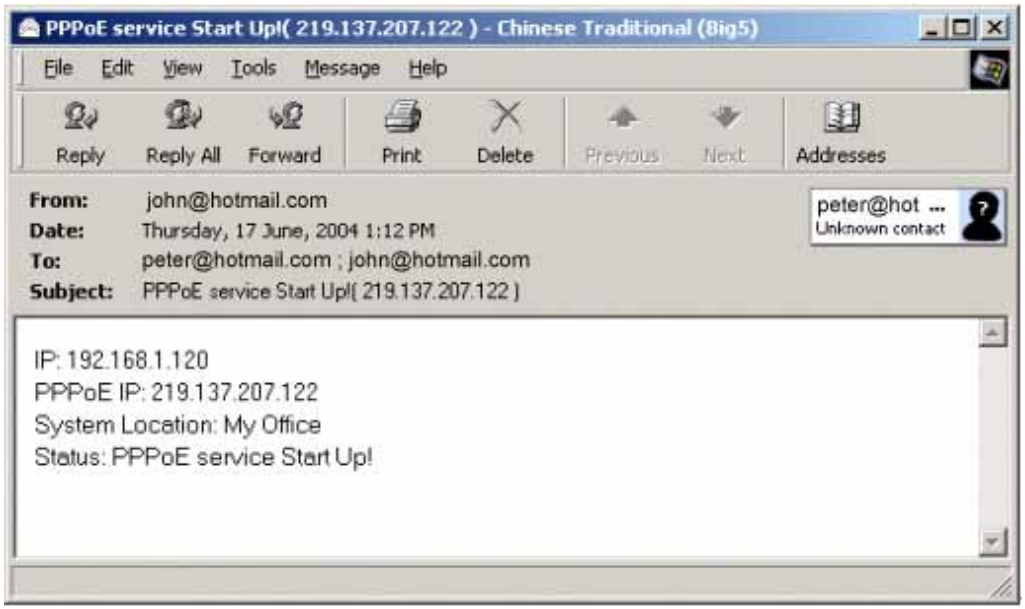

PPPoE service Start Up(219.137.207.122) - Chinese Traditional (Big5)
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: john@hotmail.com
Date: Thursday, 17 June, 2004 1:12 PM
To: peter@hotmail.com ; john@hotmail.com
Subject: PPPoE service Start Up(219.137.207.122)
peter@hot ...
Unknown contact
IP: 192.168.1.120
PPPoE IP: 219.137.207.122
System Location: My Office
Status: PPPoE service Start Up!

Fig.33 iView Event : PPPoE Connect Successful

Camera A: Motion detected. (192.168.0.30)
File Edit View Tools Message Help
Reply Reply All Forward
From: john@hotmail.com
Date: Wednesday, 15 September, 2004 11:43 AM
To: peter@hotmail.com ; john@hotmail.com
Subject: Camera A: Motion detected. (192.168.0.30)
IP: 192.168.0.30
System Location: My Office
Status:Camera A: Motion detected.

Fig.34 iView Event : Camera A or B Motion Detected

2.4.2 Motion Detection

This page allows the administrator to set motion detection functions for the cameras.

i. Camera A (or Camera B)

"Enable"

To activate motion detect, the administrator has two options;

a. "Always On" or

b. "On Schedule", the administrator can set up to 4 different time slots for motion detection.

"Detection Sensitivity"

This will determines level of change before motion capture is triggered.

"Send image every"

Select a value between 1 to 5 seconds.

"Stop sending emails after ## email(s) or image idle for ## second(s)"

iView will stop sending on the lower of the two conditions. You can set between 1, 3, 5, 7 and 10 seconds. Emails can be set from 1 to 99999 pieces, or 0 for stop sending email only when image idle occurred.

"Schedule"

If set to "On Schedule" in the above section, the administrator can then input the four preferred schedule time slots for motion detection. Time must be entered in 24hr format.

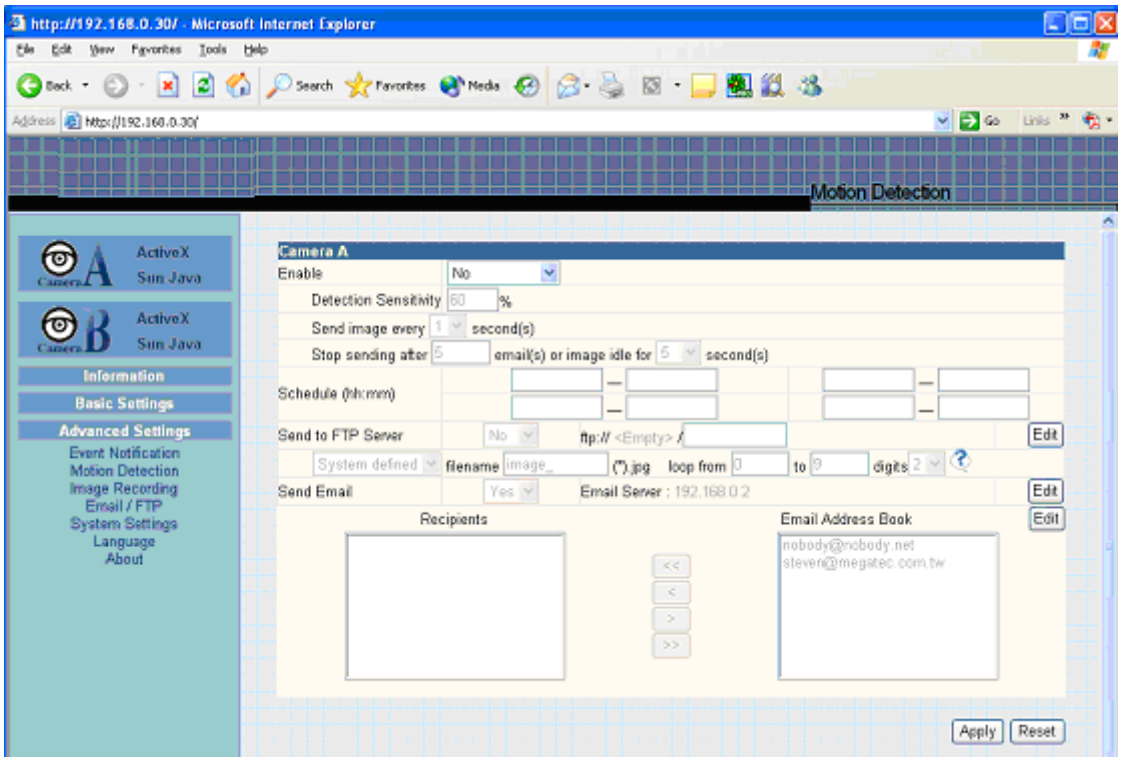


Fig.35 iView Motion Detection Page

"Send to FTP Server"

This option allows the administrator to send and store the motion- detected images on a FTP site. This is useful for future reference and recording purpose. Click "Yes" to activate.

"ftp://<empty>/<folder>"

This box allows the administrator to determine the file location within the FTP site. If you have not entered a FTP server, the above will be left <empty>.

To setup the FTP server, click “Edit” to go to the Email / FTP Page. Once you have entered the FTP server, login name and password, click “Apply” and then Click on “Motion Detect” to return here.

Enter a directory or folder name in <folder>. Click “Apply” when done.

“System Defined / User Defined”

The administrator can also determine to either have the system automatically assign the filenames for the pictures saved. Or assign these filenames.

“Filename”

Give the motion detected JPG images a standard filename prefix, to be followed by looping number suffix.

“Loop from ## to ##”

This will determine the number of suffixes preceding the above filename. Once the last number is reached, the first file will be replaced by the most current image.

“Digits”

This will determine the number of digits assignable for the above number suffix. The administrator can choose to assign between 1 to 6 digits.

Click for an example.

“Send Email”

To send an email notification of Motion Detection with image, choose “Yes”, otherwise, choose “No”

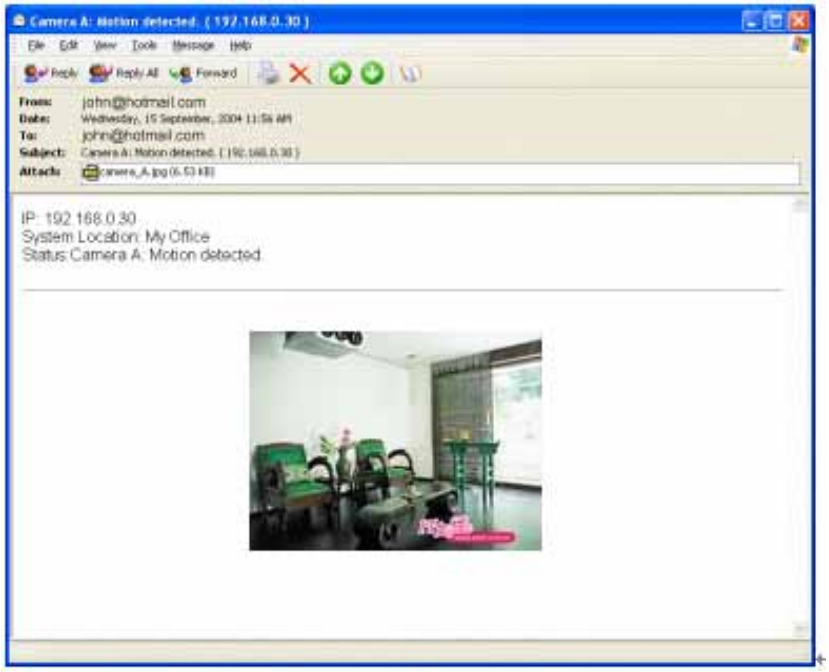

Camera A: Motion detected. (192.168.0.30)
File Edit View Tools Message Help
Reply Reply All Forward
From: john@hotmail.com
Date: Wednesday, 15 September, 2004 11:56 AM
To: john@hotmail.com
Subject: Camera A: Motion detected. (192.168.0.30)
Attach: camera_A.jpg (6.53 KB)
IP: 192.168.0.30
System Location: My Office
Status: Camera A: Motion detected

Fig.36 iView Motion Detect Email Notification

"Email Server"

The administrator will have to set this up. Otherwise, click "Edit" to go to the Email / FTP Page to make the necessary configuration. Click on Motion Detection to return here.

"Recipient" & "Email Address Book"

The administrator can determine who shall receive email notification. To add to the recipient list, either double click on the email in the address book or click < . To add all the email address at once, click << .To remove an entry click > , or >> to remove all entries from the recipient list.

Click Apply to confirm and save the above settings.

2.4.3 Image Recording

Image recording allows the user to receive an image to either their email account or to a FTP server. The images will be sent over a predetermined interval and a certain period.

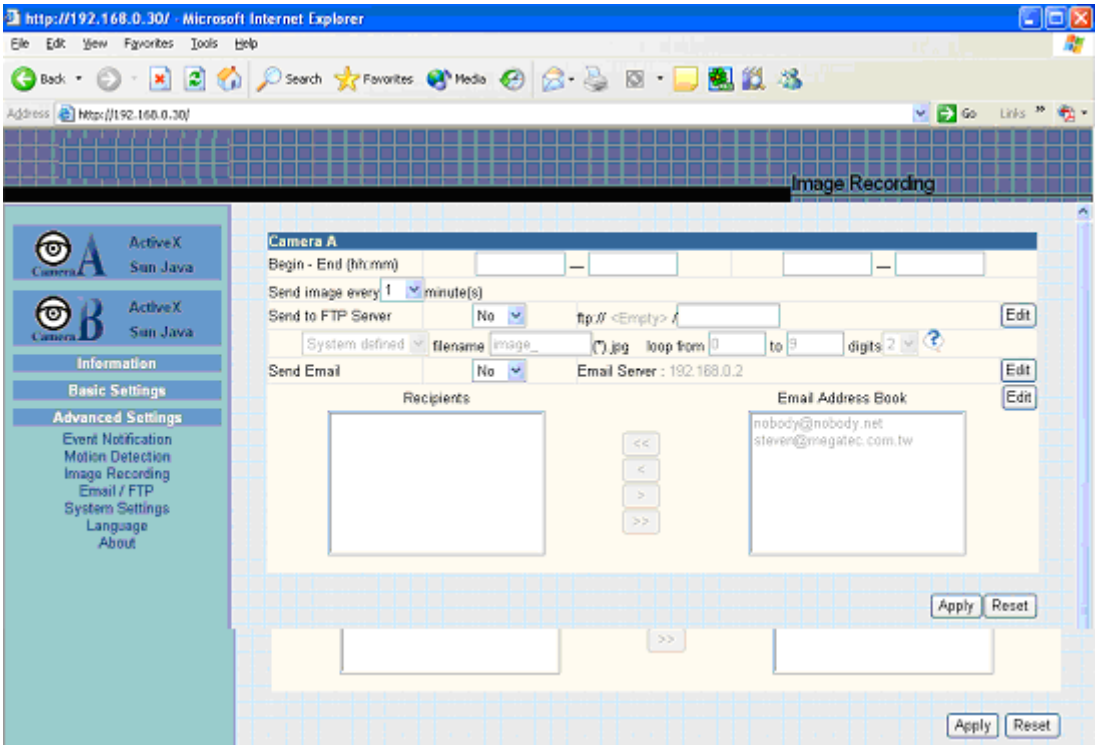


Fig.37 iView Image Recording Page

i. Camera A (or Camera B)

"Begin – End (hh:mm)"

The administrator can determine up to 2 time slots when Image Recording is active. The time is in 24hrs format.

"Send image every ## minute(s)"

The administrator can determine the exact interval at which iView capture and send an image. Choose among 1, 3, 5, 7 and 10 minutes.

"Send to FTP Server" & "Send Email"

This is similar to the function available in Motion Detection Page. Please refer to section 2.4.2 for details.

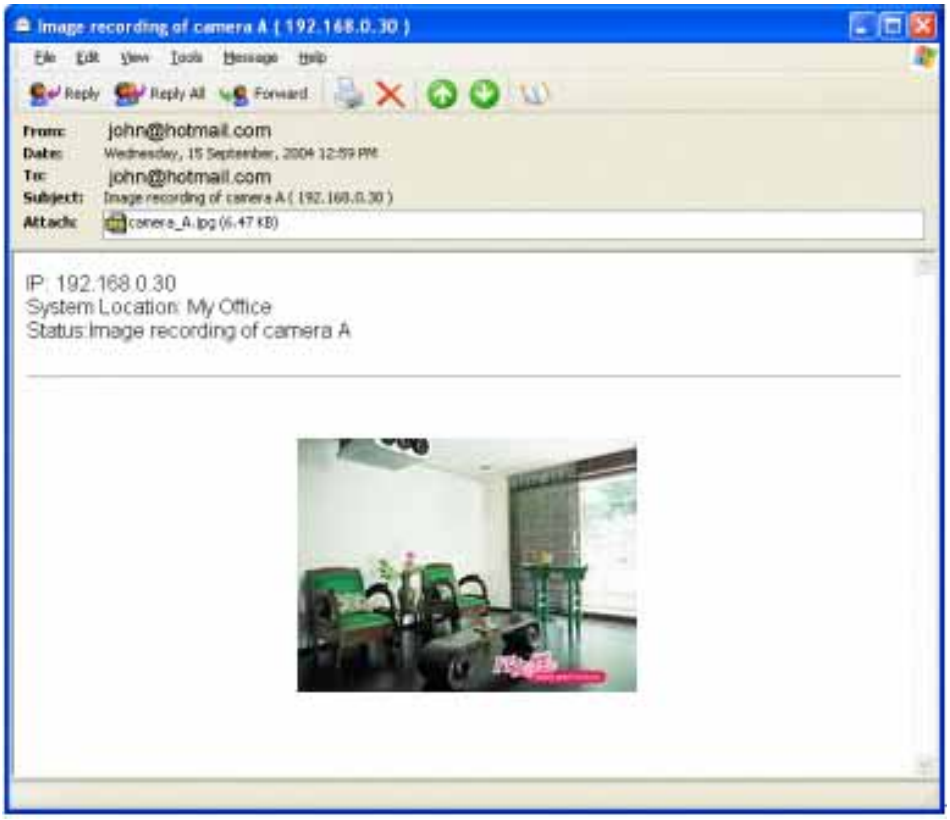


Image recording of camera A (192.168.0.30)
File Edit View Tools Message Help
Reply Reply All Forward
From: john@hotmail.com
Date: Wednesday, 15 September, 2004 12:59 PM
To: john@hotmail.com
Subject: Image recording of camera A (192.168.0.30)
Attach: camera_A.jpg (6.47 KB)
IP: 192.168.0.30
System Location: My Office
Status:Image recording of camera A

Fig.38 iView Email of Image Recorded

2.4.4 E-mail / FTP

This section sets up the necessary Email and FTP server information. The administrator will have to enter a valid Account Name and Password to the Email server and/or FTP server. This information is necessary to allow email notification and ftp file sending features in Advanced Settings.

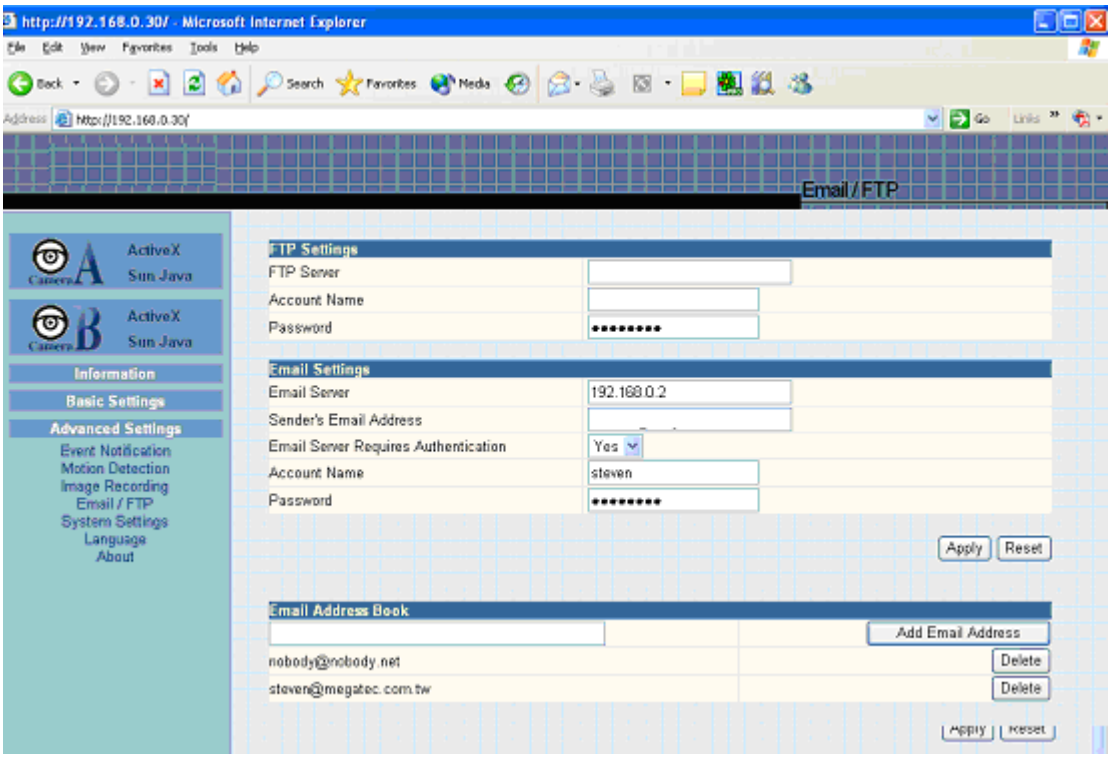


Fig.39 iView Email / FTP Page

i. FTP Settings

"FTP Server"

The administrator will have to enter the FTP server address here.

"Account Name"

Enter the FTP account name here

"Password"

Enter the corresponding password.

Click "Apply" to save the above settings.

ii. Email Settings

"E-mail Server"

The administrator will have to enter the Email server address here.

"Sender's Email Address"

This will determines iView's Email address.

"Email Server Requires Authentication"

If set to "YES", the administrator will have to provide the account name and password in order to access the Email server. Otherwise, enter "NO".

"Account Name"
Enter the account name or login name to the Email server.

"Password"
Enter the password for the above account name.

Click "Apply" to save the above changes.

iii. Email Address Book

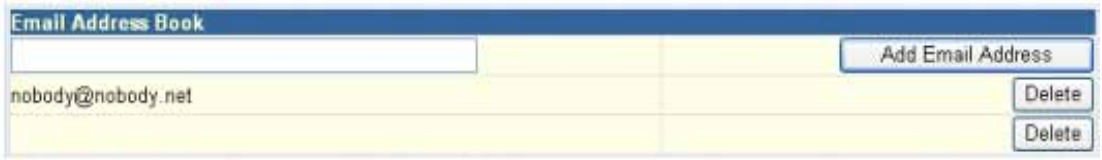


Fig.40 iView E-mail Address Book Entry

Enter an Email address in the box provided and click "Add Email Address". The new email address will be added to the list. The administrator can store up to 20 email addresses here.

To delete an Email address, just press "Delete".

2.4.5 System Settings

This page allows the administrator to set iView SNMP settings so it can be used by a NMS (Network Management System) like IP2cam MultiView.

i. System Time

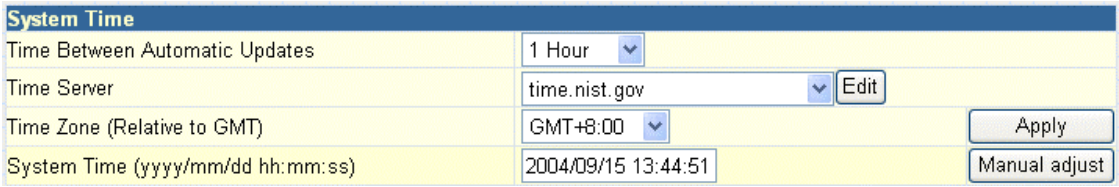


Fig.41 System Time

"Time Between Automatic Updates"

The administrator can set an interval for time synchronization. Select either 1, 3,12 hours or 1, 10 & 30 days.

"Time Server"

Choose the nearest Time Server to your iView location. The administrator can choose from the list of a maximum of 30 Time Servers.

To add a new Timer Server the administrator must first make space by deleting some Time Servers. Once this is done, the add dialog box will appear as below. Click "Back" to return to the System Settings Page.

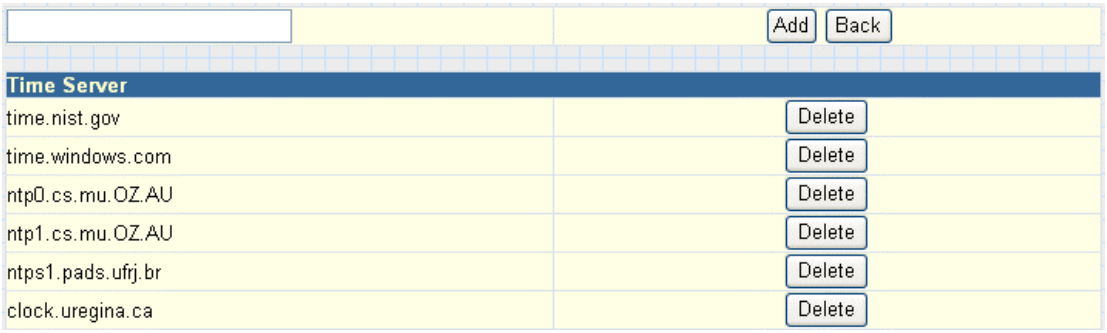


Fig.42 List of Time Server

"Time Zone (Relative to GMT)"

Select the appropriate time zone for your area. Click "Apply" to save.

"System Time (yyyy/mm/dd hh:mm:ss)"

This section is to manually set iView System Time. The format is pre-determined to: yyyy/mm/dd hh:mm:ss. Click "Manual Adjust" to save any manual changes.

ii. System Restart

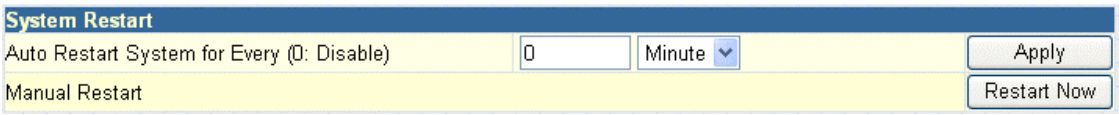
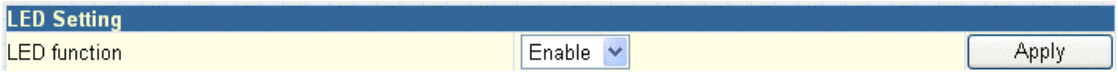


Fig.43 Auto Restart Setting

"Auto Restart System Every"
The administrator can choose to restart iView at certain intervals (choose between minutes and hours only). This will ensure that iView will work smoothly. Click "Apply" to save changes. Default is set as 5 hours.

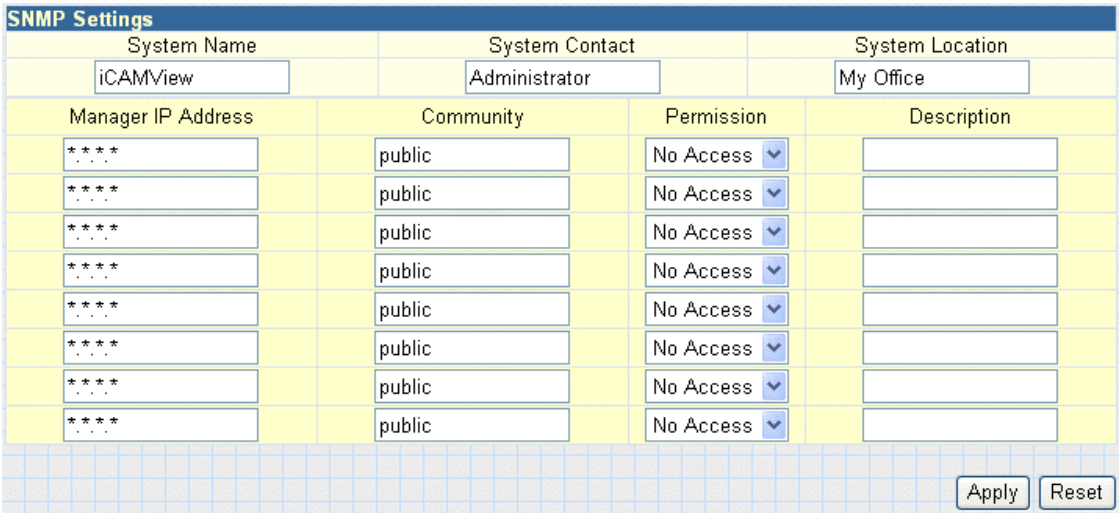
"Manual Restart"
Click "Restart Now" to restart the system immediately.

iii. LED Settings



"LED function"
The administrator can enable or disable the LED (except the Power LED) on iView here. Click "Apply" to save settings.

iv. SNMP Settings



"System Name"
This is to give iView a name identifiable in a SNMP network.

"System Contact"
This is to give the administrator a name.

"System Location"
This is to set iView location.

"Manager IP Address"
This set the IP address where the administrator can manage iView from. It is valid for up to 8 IP addresses. To manage iView from any IP addresses leave it as *.*.*.*.

"Community"
This is to set a Community name for NMS. The community name has to be the same as that set in NMS.

"Permission"

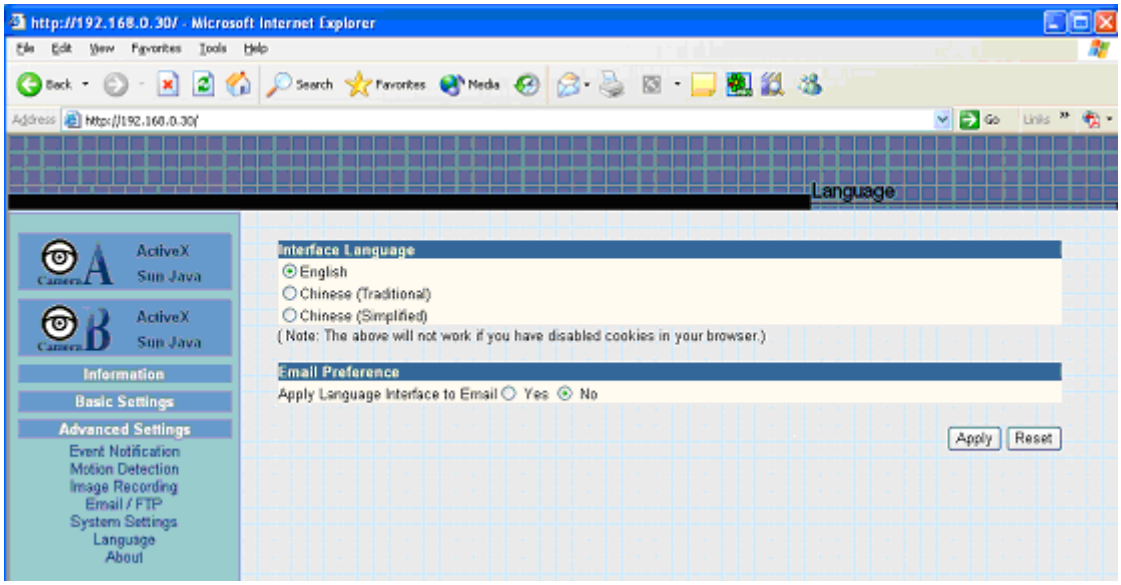
This is to set the administrator's authority. Options are Read, Read/Write, and No Access.

"Description"

This is for an administrator to make notes.

2.4.6 Language

Use this section is to set iView Interface language.



i. Interface Language

At the moment, the administrator can only choose between; English, Chinese (Traditional) and Chinese (Simplified).

ii. Email Preference

Click "Yes" to apply language interface to Email notification.

2.4.7 About

The administrator can use this section to check firmware information, save/restore settings, upgrade firmware and see manufacturer's details.

i. About

This section gives crucial information about iView's Firmware Version, Hardware Version and Serial Number. These are required information for service calls.

ii. Save / Restore Settings

"Save current Configuration"

Click "Save" to save the current settings and configuration to your PC. The text file will have a default format of YYYY_MMDD_####.cfg. The administrator can change this, if necessary.

"Restore previous configuration"

This function is only available if a setting has been saved initially. Browse to the location where the file is saved and click "Restore"

"Reset to factory default"

This function will reset all settings to its default value.

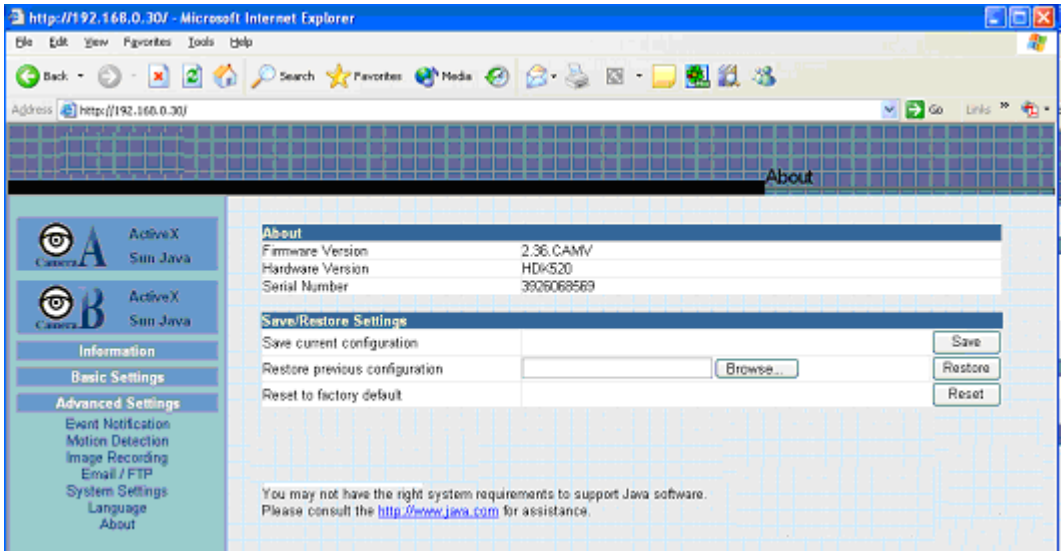


Fig.44 iView About Page

"Upgrade Firmware"

Click to check for the latest firmware. iView will automatically download and install the latest firmware

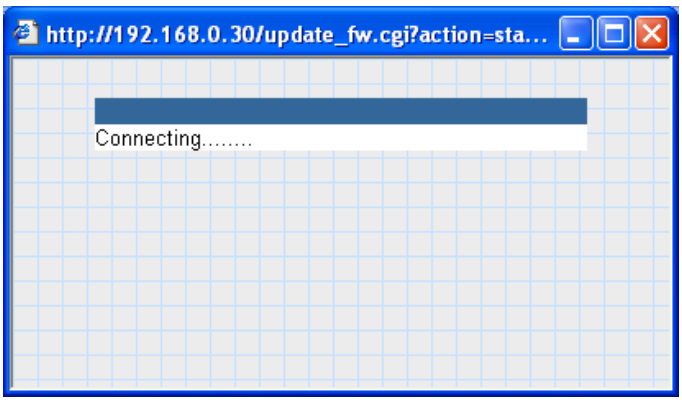


Fig.45 iView checking for latest firmware to upgrade

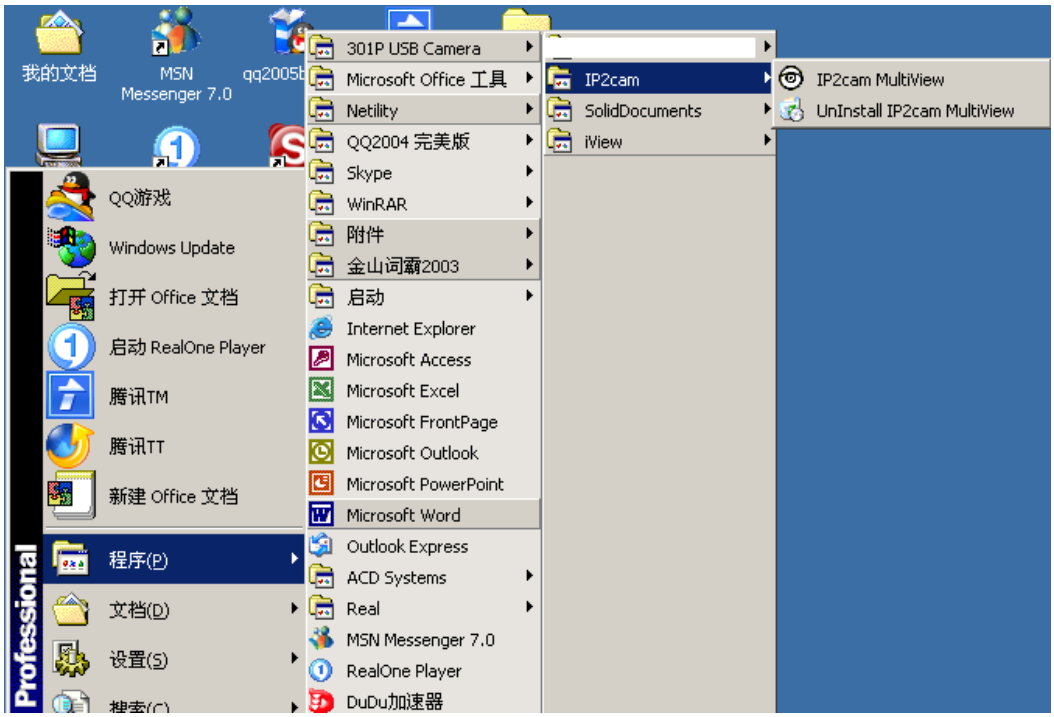
Chapter 6: IP2cam MultiView

IP2cam MultiView is a program to manage multiple iViews in a network. It is able to detect the IP's of all the iViews Web Servers installed, and display them in a list form for easy management.

Section 1. Installing IP2cam MultiView

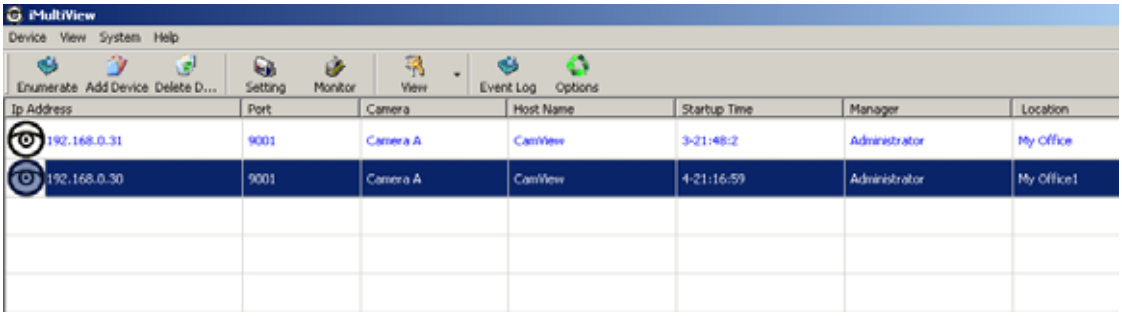
1. Select and open the "IP2cam Multview" folder on the CD-ROM
2. Run "IP2cam Multview utility.exe" and follow the installation wizard
3. After installation, there will be a ***"IP2cam***" group in the Windows Start group and a IP2cam Multiview icon on your desktop

4. Click "IP2cam Multview" to start using the program.



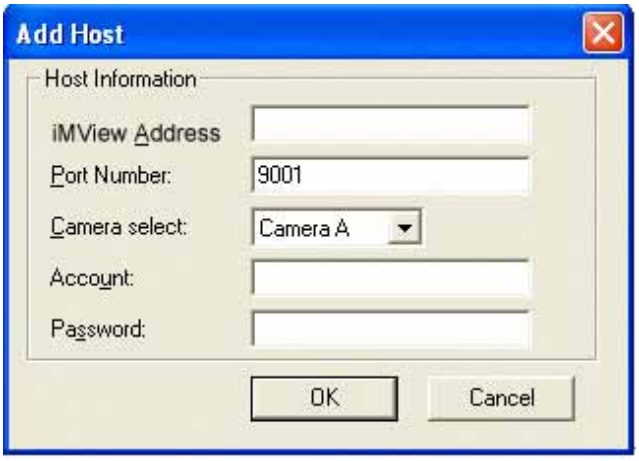
Section 2. Using IP2cam MultiView

After the IP2cam MultiView program start up the following main windows will be displayed.


iMultiView
Device View System Help
Enumerate Add Device Delete D... Setting Monitor View Event Log Options
Ip Address Port Camera Host Name Startup Time Manager Location
192.168.0.31 9001 Camera A CamView 3-21:48:2 Administrator My Office
192.168.0.30 9001 Camera A CamView 4-21:16:59 Administrator My Office1

2.1 Device

- Start iMultiView and press the “Enumerate” button, iMultiView will start a search for all the iView on network and list them in the main window.
- Manually adds the iView to be monitored. Enter the assigned iView IP Address. Port Number by default is 9001. You will have to enter the account and password if one has been set earlier. Otherwise just press “OK”.



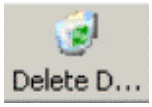
Once detected, the following will show in the main window:

Host Address	Port	Camera	Host Name	Startup Time	Manager	Location
192.168.0.30	9001	Camera A	CamView	1-7:11:26	Administrator	My Office

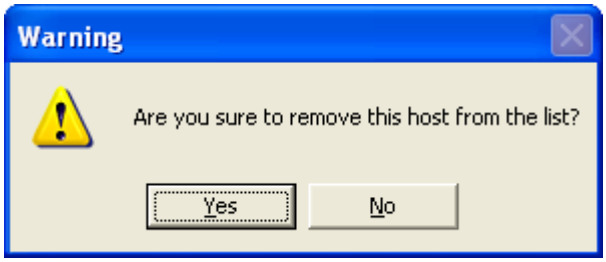
This shows that the camera is online and active.

Host Address	Port	Camera	Host Name	Startup Time	Manager	Location
192.168.0.31	9001	Camera A	CamView	1-0:55:15	Administrator	My Office

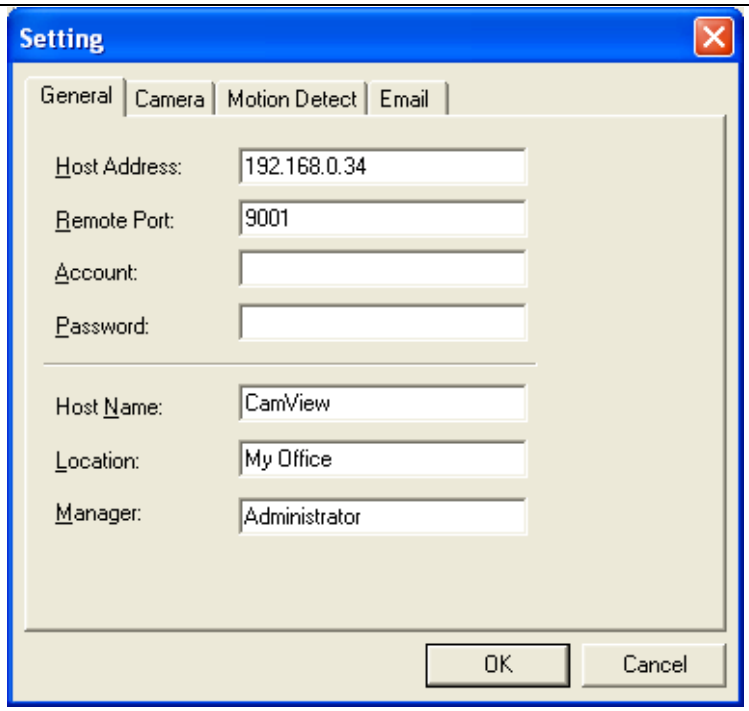
This shows that the camera is off-line



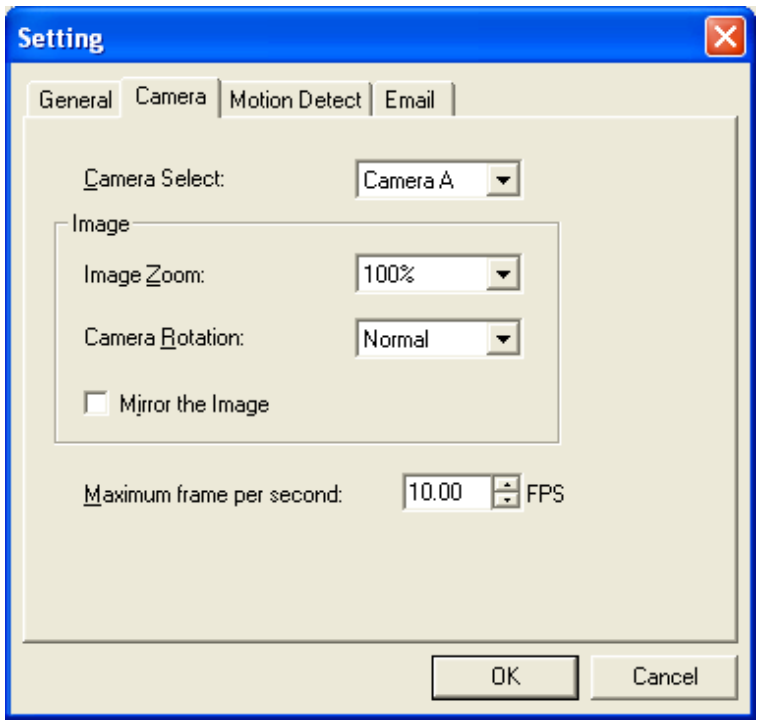
Highlight the iView to be deleted from iMultiView’s list. Click “Yes” to confirm deletion of selected iView.



Display the General iView settings. Key in a Host Name and Location for the camera.



Display the current Camera settings.



Camera Select: Select either camera A or B

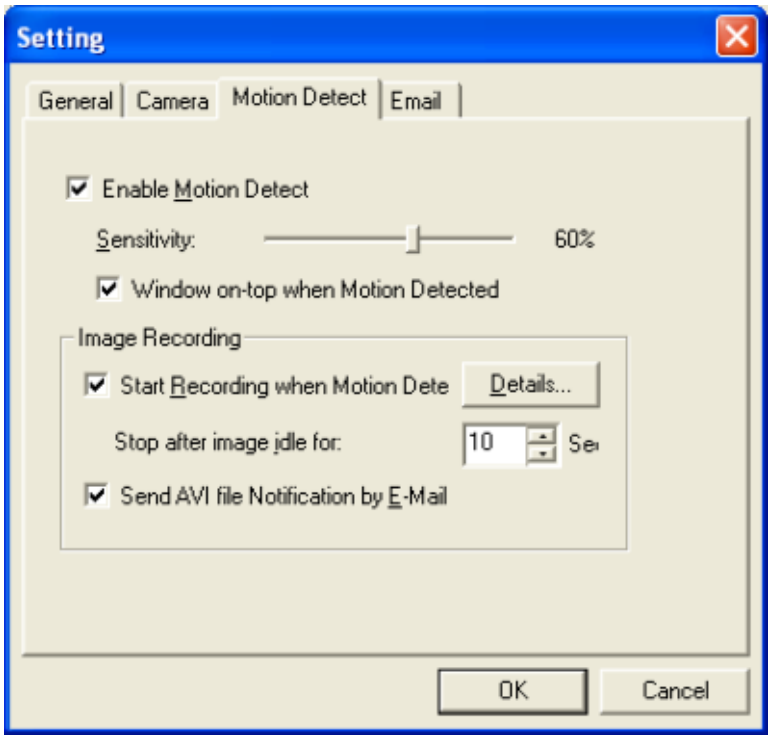
Image Zoom: Resize the window to between 25% and 200%

Camera Rotation: Rotate the image if necessary

Mirror the Image: To mirror the image.

Maximum frame per second: Select from 0.01 fps to a maximum of 30.00 fps

Display the Motion Detection Settings.



Enable Motion Detect:	Click the checkbox to enable Motion Detection. **Note:** This function requires the Camera Window be active. Click "Monitor" to activate the Window.
Sensitivity:	Choose from 0% to 100% (very sensitive)

Image Recording

Click Start Recording when Motion Detected to enable the feature.

Click the "Details" button for the following option;

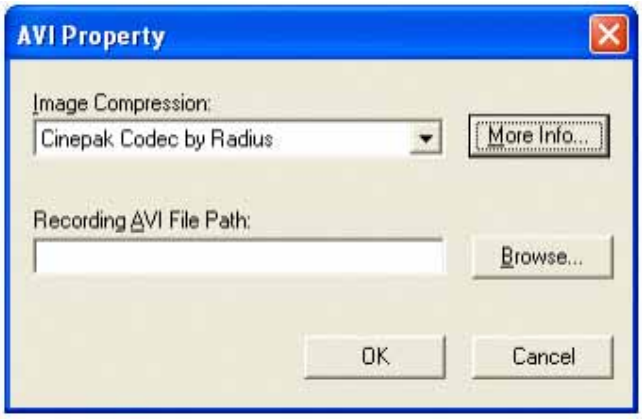
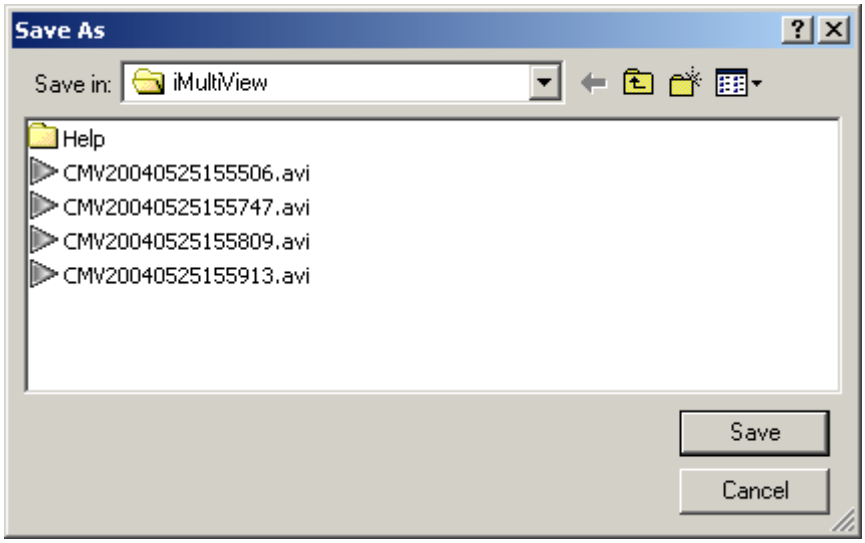


Image Compression:	Choose from the list of available compressions. **Note:** This list is dependent on the Codec

that is available / installed on the local PC.

Recording AVI File Path — Location where the file will be recorded to.



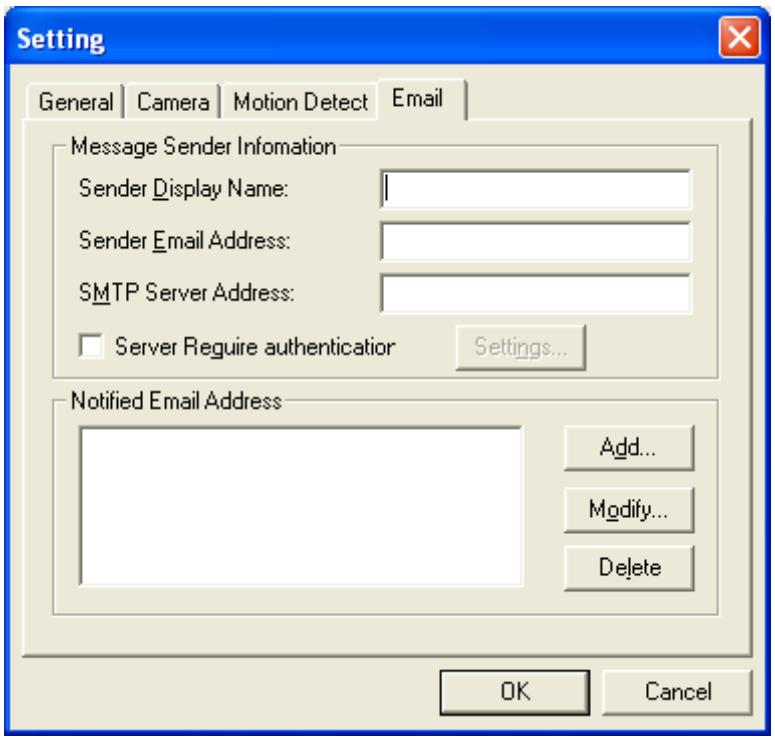
Recorded files are save using the following file extension; *CMV[year][month][date][hour][minute][seconds]*. The time here denote the record start time.

Note: Use the "Detail View" to check the record stop time. You can change the display view or add a new folder here.

Stop after idle for: Set the value between 1 to 100 seconds

Send AVI file Notification by Email: — Send an AVI file via email in the event any motion is detected.

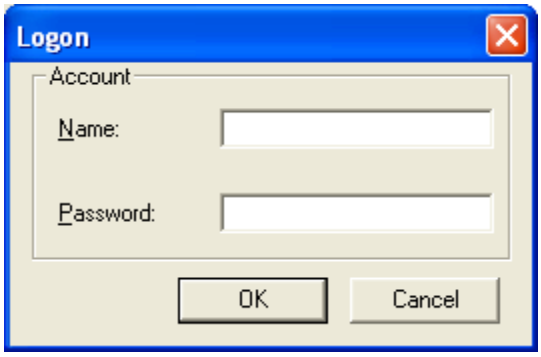
Configure Settings for Email Notification



You will need to configure the "Message Sender Information" in order for iView to send emails.

Server Require Authentication

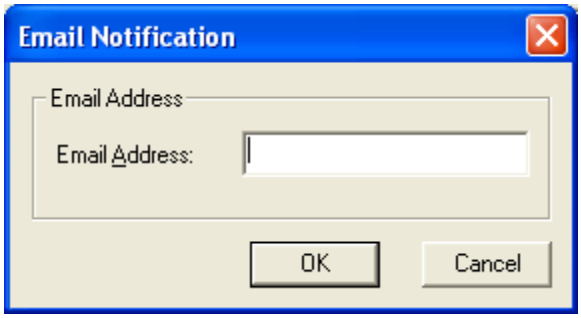
Click "settings…"



Enter your Account Name and Account Password if your Server Requires Authentication.

Notified Email Address

Click "Add…" and enter a new Email address below



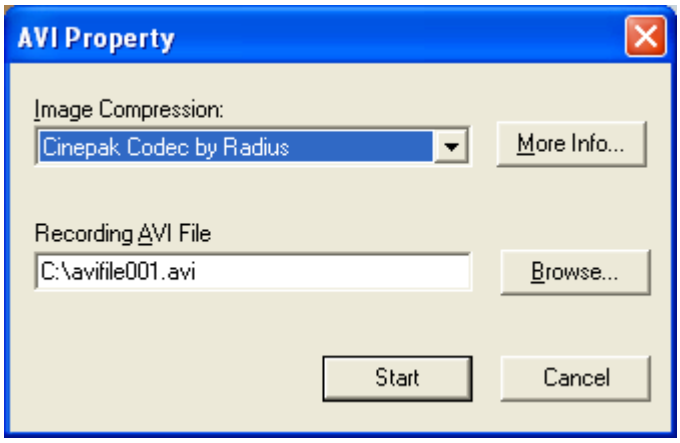
Click "Modify…" to modify the entered Email Address

Click “Delete” to remove an email address from the notification list.

:Highlight the iView in the main windows display, and click “Monitor” to view the video stream.

Move the curser over the edges of the picture and it will turn into an arrow. Click and hold to pan / tilt the camera (if the camera supports this function)

Click this button to record the current image on screen. A window will come up, click “Start” to start recording to the default file and location.



Flip the image vertically

Rotate Left, Rotate Right

Click this to bring up the Setting windows.

Click this to switch to full screen view. Double click to switch back to current view.

Click and drag to resize the window and it's contents.

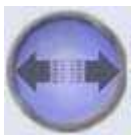
Click the left side of the viewing window to bring out more control features.

Clicking once will cause the camera to pan left by 1 deg.
Click and hold and the camera will pan increasingly faster to the left.

Clicking once will cause the camera to pan right by 1 deg.
Click and hold and the camera will pan increasingly faster to the left.

Click once to tilt the camera up by 1 deg.
Click and hold and the camera will tilt increasingly faster upwards.

Click once to tilt the camera down by 1 deg.
Click and hold and the camera will tilt increasingly faster downwards.

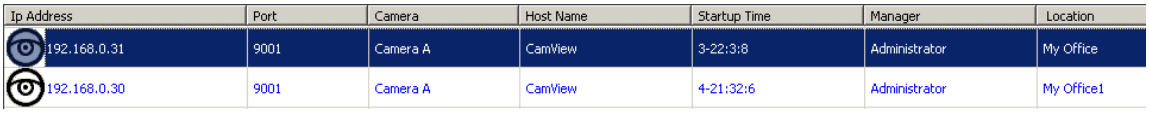


Auto Pan (if camera which support this function)

2.2 View

: Switch between Large or Small icon view

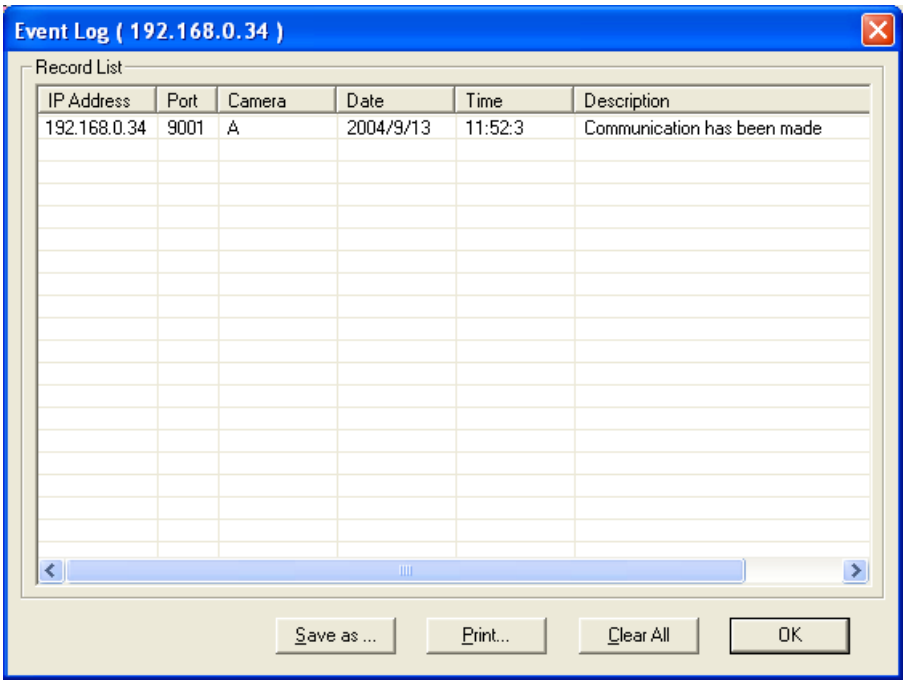
Large icon display



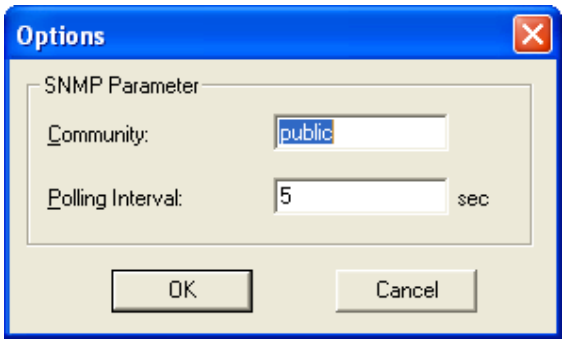
Small icon display

2.3 System

: Display the Event Log (IP address, Port, date, Time, description of event) of the selected iView.



: Set the SNMP Parameter.



2.4 Drag-and-Drop Feature

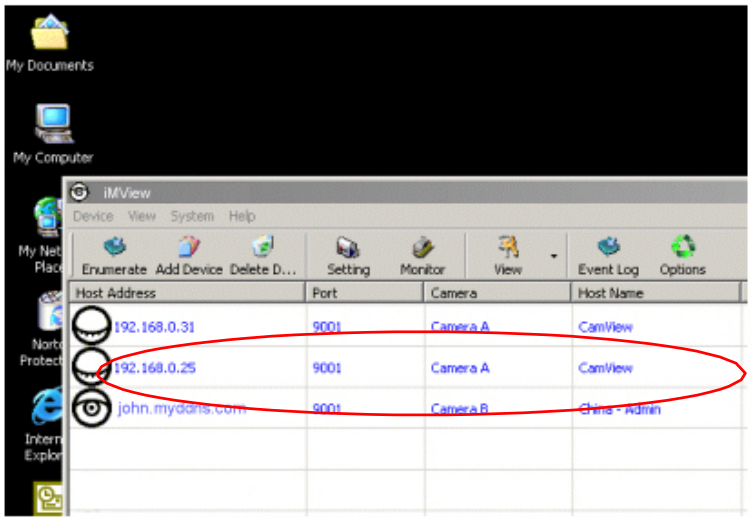
IP2cam MultiView also feature a “Drag-and-Drop to Desktop” feature. Double click the icon on your desktop to view the images immediately. Useful if you are monitoring multiple cameras at a time.

Step 1:

Select the camera location of your choice.

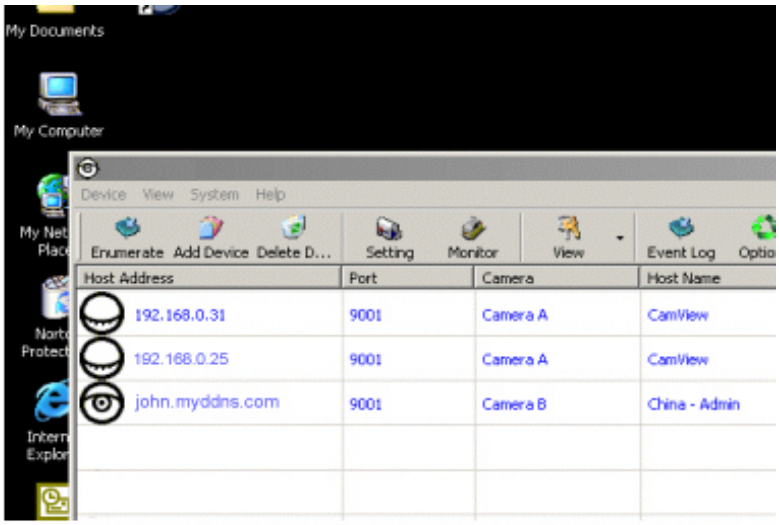
Step 2:

Left click, hold and drag it onto the desktop.


My Documents
My Computer
iMView
Device View System Help
Enumerate Add Device Delete D... Setting Monitor View Event Log Options
Host Address Port Camera Host Name
192.168.0.31 9001 Camera A CamView
192.168.0.25 9001 Camera A CamView
john.myddns.com 9001 Camera B China - Admin

Step 3:

Release the mouse button anywhere on the desktop and a new desktop icon is created there.


My Documents
My Computer
Device View System Help
Enumerate Add Device Delete D... Setting Monitor View Event Log
Host Address Port Camera Host Name
192.168.0.31 9001 Camera A CamView
192.168.0.25 9001 Camera A CamView
john.myddns.com 9001 Camera B China - Admin

Step 4:

Double click on the icon on the desktop, to view the images.

Appendix A: Router Configuration

The following section describes the initial configuration of the router and port forwarding for your router. If your router is not listed here, please refer to the manufacturer's website for assistance with configuring your router to work with iView.

Port Forwarding for iView

iView requires certain ports to be open on your router to allow other computers on the Internet to "see" it on your internal network. Normally, your router will have the less common ports disabled or blocked by the router's built-in firewall. In order for the iView applications to work properly and not be blocked, the firewall settings need to be configured. In each instance there will be a trigger port and incoming port(s), where traffic on the trigger port tells the Firewall to open the incoming ports. The iView require that TCP Port 80 and UDP 9001 (default settings) be opened to the Internet. TCP Port 80 is used for accessing the camera's homepage and UDP Port, where 9001 is used for authentication and video streaming.

If your Internet service Provider blocks port 80/9001, you'll need to reconfigure your camera and router to other ports such as 81/9002, 82/9003, etc. To change the port settings on the camera, you'll need to use iView Utility.

Follow the steps below to configure your router, depending on the router manufacturer and model. If your particular router manufacturer or model is not listed below, please contact your router manufacturer for further assistance in configuring the router.

The Following Router manufacturers and models are included in this document:

Brand	**Model**	**Description**
3Com	3C857-US	OfficeConnect Cable/DSL Gateway
	3CRWE52196	OfficeConnect Wireless Cable/DSL Gateway
Belkin	F5D6230-3	Wireless Cable/DSL Gateway Router
	F5D7230-4– 54g	Wireless DSL/Cable gateway Router
D-Link	DI-604/DI–614+/DI-624	-
	DI-704/704P	-
	DI714	-
	DI-714P+	-
Dell	TrueMobile 2300 Wireless BroadbandRouter	-
Linksys	BEFSR41	EtherFast Cable/DSL Router
	BEFSX41	Instant Broadband EtherFast Cable/DSL Firewall Router with 4-Port Switch/VPN EndPoint
	BEFW11S4	Wireless Access Point Router with 4-Port Switch – Version 2
Microsoft	MN-100	Wired Base Station
	MN-500	Wireless Base Station

NETGEAR	RP614	Web Safe Router
	MR814	Wireless Router
	MR314	Cable/DSL Wireless Router
	FVS318	ProSafe VPN Firewall
Proxim	ORiNOCO BG-2000 Broadband Gateway	-
Siemens	SpeedStream 2602	2-Port DSL/Cable Router
	SpeedStream 2623	Wireless DSL/Cable Router
	SpeedStream 2604	4-port DSL/Cable Router
	SpeedStream 2624	Wireless DSL/Cable Router
SMC	SMC2404WBR	Barricada Turbo 11/22Mbps Wireless Cable/DSL Broadband Router
	SMC7004VBR	Barricada Cable/DSL Broadband Router
	SMC7004CWBR	Barricada Wireless Cable/DSL Broadband Router
	MC7004AWBR	Barricade 4-port 11Mbps Wireless Broadband Router

3Com (http://www.3com.com)

3C857-US – OfficeConnect Cable/DSL Gateway
3CRWE52196 – OfficeConnect Wireless Cable/DSL Gateway

1. Log into your router.

2. On the main page, select **Firewalls** on the left side of the page.

3. Select the **Virtual Servers** tab at the top of the page.

4. Click **New** on the right side of the page to open the Virtual Server Settings dialog box.

5. Type in the camera's IP address in the Server IP address text box. (Look on the iView IP address LCD display for the last 3 digits of the camera's IP address.)

6. Under Local Service, select **Custom**.

7. Under Custom Service Name, type in: **iView**.

8. Under Specify Custom Service Ports, type in: **80, 9001**.

9. Click **Add** to save the settings. The iView should now be configured to work with your router and be accessible from the Internet.

Belkin (http://www.belkin.com)

F5D6230-3 – Wireless Cable/DSL Gateway Router

1. Log into your router.

2. On the main page, select **Virtual Server** on the left side of the page under the Security section.

3. Enter the following information on the page:

Line #1:

Private IP:	Type in the **camera's IP address** (Look on the iView IP Address LCD display for the last 3 digits of the camera's IP address)
Private Port:	80
Type:	TCP
Public Port:	80

Line #2

Private IP:	Type in the **camera's IP address** (Look on the iView IP Address LCD display for the last 3 digits of the camera's IP address)
Private Port:	9001
Type:	UDP
Public Port:	9001

4. Click **Enter** to save the settings. The iView should now be configured to work with your router and be accessible from the Internet.

F5D7230-4 – 54g Wireless DSL/Cable gateway Router

1. Log into your router.

2. On the main page, select **Firewall** on the left side of the page.

3. Under Firewall, select **Virtual Servers**.

4. Enter the following information on the page:

Line #1

Enable:	Checked in
Description:	iView – Webpage
Internet Port:	80 to 80
Type:	TCP
Private IP address:	Type in the **camera's IP address**. (Look on the iView Address LCD display for the last 3 digits of the camera's IP address)

Private Port	80 to 80
Line #2	
Enable:	Checked in
Description:	iView – Camera
Internet Port:	9001 to 9001
Type:	UDP
Private IP address:	Type in the **camera's IP address** (Look on the iView Address LCD display for the last 3 digits of the camera's IP address)
Private Port	9001 to 9001

5. Click **Apply Changes** to save the settings. The iView should now be configured o work with your router and be accessible from the Internet.

D-Link (http://www.dlink.com)

DI-604/DI – 614+/DI-624

1. Log into your router

2. On the main page, click on **Advanced** at the top of the page.

3. On the left side of the page, click on **Virtual Server**. Note: Make sure DMZ host is disabled. If DMZ is enabled, it will disable all Virtual Server entries.

4. Enter the following information on the page:

Enable/Disable:	Enabled
Name:	iView - Webpage
Private IP:	Type in the **camera's IP address**, for example: 192.168.0.5
Protocol Type:	TCP
Private Port:	80
Public Port:	80
Schedule:	Always

5. Click **Apply** to save the settings.

6. Enter the following information on the page:

Enable/Disable:	Enabled
Name:	iView - Webpage
Private IP:	Type in the **camera's IP address**, for example: 192.168.0.5
Protocol Type:	UDP
Private Port:	9001
Public Port:	9001
Schedule:	Always

7. Click **Apply** o save the settings. iView should now be configured to work with your router and be accessible from the Internet.

DI-704/704P

1. Log into your router

2. On the main page, click on **Advanced** at the top of the page.

3. On the **Virtual Server** page, enter the following information; For

ID#1:	
Service Port:	80
Service IP:	Type in the **camera's IP address**, for example: 192.168.0.5

Enabled/Disabled: Enabled

For ID#2
Service Port: 9001
Service IP: Type in the **camera's IP address**, for example: 192.168.0.5
Enabled/Disabled: Enabled

4. Save your settings. iView should now be configured to work with your router and be accessible from the internet.

DI714

1. Log into your router

2. On the main page, click on **Advanced** at the top of the page.

3. Click on **Virtual Server Settings** on the left side of the page.

4. Enter the camera's IP address into the Internal IP field. Under Service, select **All** and then click **Submit** to save your settings. iView should now be configured to work with your router and be accessible from the internet.

DI-714P+

1. Log into your router

2. On the main page, click on **Advanced** at the top of the page.

3. On the left side of the page, click **Virtual Server**.

4. Enter the following information on the page:
For ID#1:
Service Port: 80
Service IP: Type in the **camera's IP address**, for example: 192.168.0.5
Enabled/Disabled: Enabled

For ID#2
Service Port: 9001
Service IP: Type in the **camera's IP address**, for example: 192.168.0.5
Enabled/Disabled: Enabled

5. Click **Apply** to save your settings. iView should now be configured to work with your router and be accessible from the internet.

Dell (http://www.dell.com)

TrueMobile 2300 Wireless Broadband Router

1. Log into your router

2. On the main page, click on **Advanced Settings** at the top of the page.

3. Go to the Port Forwarding section and select Custom Port Forwarding Settings.

4. Check the **Enable** box.

5. Enter the desired name or description in the **Service Name** field such as **iView Web**.

6. In the **Incoming Ports** field, specify port **80** in both boxes.

7. In the **Destination IP Address** field, enter the IP address of iView

8. In the **Destination MAC Address** field, enter the MAC address of iView. You can find the camera's MAC address by either looking at the MAC address sticker on the bottom of the camera or by utilizing iView setup utility to display the MAC address.

Linksys (http://www.linksys.com)

BEFSR41 – EtherFast Cable/DSL Router

BEFSX41 – Instant Broadband EtherFast Cable/DSL Firewall Router with 4-Port Switch/VPN EndPoint

BEFW11S4 – Wireless Access Point Router with 4-Port Switch – Version 2

1. Log into your router

2. On the router's main page, click on **Advanced** at the top of the page.

3. On the next page, click on **Forwarding**.

4. Enter the following information on the page:

Line #1:

Customized Applications:	iView – Webpage
Ext. Port:	80 to 80
Protocol:	TCP
IP Address:	Type in the **camera's IP address**, for example: 192.168.0.5
Enable:	Checked in

Line #2:

Customized Applications:	iView – Camera
Ext. Port:	9001 to 9001
Protocol:	UDP
IP Address:	Type in the **camera's IP address**, for example: 192.168.0.5
Enable:	Checked in

5. Click on **Apply** to save the settings. iView should now be configured to work with your router and be accessible from the Internet.

Microsoft (http://www.microsoft.com/hardware/broadbandnetworking)

MN-100 – Wired Base Station
MN-500 – Wireless Base Station

1. Log into your router

2. Open the Bass Station Management Tool, and then click **Security**.

3. On the Security menu, click **Port Forwarding**, and then click **Set up persistent port forwarding**.

4. In the Enable checkbox, check in the checkbox.

5. In the Description box, type a description of the server field such as: **iView Web**.

6. In the Inbound port boxes, type in: **80 – 80**. (i.e. from Port 80 to Port 80)

7. In the Type box, select the protocol as **TCP**.

8. In the Private IP address box, type in the **IP Address** of the iView network camera. For example, type in: 192.168.0.5.

9. In the Private port boxes, these values are automatically filled in from Step 6 and should already show **80 – 80**.

10. On the next empty line, repeat steps 4-9, except this time the Description should be **iView Cam** and the Inbound/Private port boxes should be **9001 – 9001** (UDP). The protocol and private IP address should be the same.

11. Click **Apply** to save the changes you have made. iView should now be configured to work with your router and be accessible from the Internet.

NETGEAR (http://www.netgear.com)

RP614 – Web Safe Router
MR814 – Wireless Router

1. Log into your router.

2. Click **Advanced -> Port Forwarding** on the left side of the page.

3. Click Add Customer Service.

4. Enter the following information on the page:

Service Name:	iView – Web
Starting Port:	80
Ending Port:	80
Server IP Address :	Type in the **camera's IP address**, for example: 192. 168. 0. 5

5. Click **Apply** to save the settings.

1. Enter the following information on the page:

Service Name:	iView – Cam
Starting Port:	9001
Ending Port:	9001
Server IP Address:	Type in the **camera's IP address**, for example: 192.168.0.5

7. Click **Apply** to save the settings. iView should now be configured to work with your router and be accessible from the internet.

MR314 – Cable/DSL Wireless Router

1. Log into your router.

2. Click **Advanced** on the left side of the page.

3. Click **Ports**.

4. Enter the following information on the page:

Line #1:	
Starting Port:	80
Ending Port:	80
Server IP Address:	Type in the **camera's IP address**, for example: 192.168.0.5

Line #2:

Starting Port:	9001
Ending Port:	9001
Server IP Address:	Type in the **camera's IP address**, for example: 192.168.0.5

5. Click **Apply** to save the settings. iView should now be configured to work with your router and be accessible from the internet.

FVS318 – ProSafe VPN Firewall

1. Log into your router.

2. On the main page, click on **Add Service** on the left side of the screen.

3. Click Add Customer Service.

4. In the **Name** field enter a name for the camera, for example:
iView Web:

Type:	TCP
Start Port:	81
Finish Port:	81

5. Click **Apply** to save the settings.

6. There is a bug in the NETGEAR FVS318 1.4 firmware that does not record any entry that uses port 80. If you intend to use port 80, you will initially need to enter 81 for the Start and Finish port, and then edit the entry to port back to 80. Click on **Add Service** on the left side of the screen.

7. In the **Service Table** window select iView Web and click **Edit Service**.

8. Change the **Start** and **Finish** port to **80**. Click **Apply**.

9. On the main page, click on **Add Service** on the left side of the screen and then click **Add Custom Service**. In the **Name** field enter a name for the camera, for example: **iView Cam**.

Type:	UDP Start
Port:	9001
Finish Port:	9001

10. Click **Apply** to save the settings.

11. On the main page, click on **Ports** at the side of the screen.
    A. Click **Add**.
    B. For Service Name select: iView Web
    C. Action: **ALLOW always**

D. Local Server Address: Enter the IP address of the camera
E. WAN Users Address: **Any**
F. Click **Apply**.

12. Click Add again.
A. For Service name select: **iView Cam**
B. Action: ALLOW always
C. Local Server Address: Enter the IP address of the camera
D. WAN Users Address: **Any**
E. Click **Apply**.

13. Exit the router setup program. iView should now be configured to work with your router and be accessible from the internet.

Proxim (http://www.proxim.com)

ORiNOCO BG-2000 Broadband Gateway

1. Log into your router.

2. On the router's main page, click on **Setup** at the top of the page.

3. On the left side of the page, click on **Advanced settings -> Port Forwarding**.

4. Check in the checkbox for **Enable Port Forwarding**.

5. Click **New** on the right side of the page.

6. Enter the following information on the page:

Global Port:	80
Local Address:	Type in the **camera's IP address**, for example: 192.168.0.5
Local Port:	80
Type:	TCP

7. Click **Save** to save the settings.

8. Click **New** on the right side of the page.

9. Enter the following information on the page.

Global Port:	9001
Local Address:	Type in the **camera's IP address**, for example: 192.168.0.5
Local Port:	9001
Type:	UDP

10. Click **Save** to save the settings.

11. Click **Restart** on the left side of the page to restart your router. iView should now be configured to work with your router and be accessible from the internet.

Siemens (http://www.speedstream.com) SpeedStream 2602 – 2-Port DSL/Cable Router SpeedStream 2623 – Wireless DSL/Cable Router SpeedStream 2624 – Wireless DSL/Cable Router

1. Log into your router.

2. After you have logged in, click on **Advanced Setup -> Virtual Servers**.

3. Enter the following information on the page:

Line #1:

Private IP:	Type in the **camera's IP address**, for example: 192.168.0.5 (Look at iView's IP Address LCD display for the last 3 digits of the camera's IP address) Private Port: 80
Type:	TCP
Public Port:	80

Line #2

Private IP:	Type in the **camera's IP address**, for example: 192.168.0.5 (Look at iView's IP Address LCD display for the last 3 digits of the camera's IP address) Private Port: 9001
Type:	UDP
Public Port:	9001

4. Click **Enter** to save the settings. iView should now be configured to work with your router and be accessible from the Internet.

SpeedStream 2604 – 4-port DSL/Cable Router

1. Log into your router.

2. After you are logged in, click on **Advanced Setup -> Virtual Servers**.

3. Under the Properties section, there are a few entries you'll need to add. Check in the checkbox for **Enable**.

4. Under the first box, next to the Enable checkbox, type in: **iView Web**.

5. Under PC (Server), select your camera or the camera's IP address from the list. If the camera is not listed, select the link titled "My PC is not listed."

6. Leave Protocol as **TCP**.

7. Under Internal Port No type in: **80**

8. Under External Port No type in: **80**

9. Click on **Add** to save these settings.

10. Under the first box, next to the Enable checkbox, type in: **iView Cam**.

11. Under PC (Server), select your camera or the camera's IP address from the list. If the camera is not listed, select the link titled "My PC is not listed."

12. Leave Protocol as **TCP**.

13. Under Internal Port No type in: **9001**

14. Under External Port No type in: **9001**

15. Click on **Add** to save these settings. iView should now be configured to work with your router and be accessible from the Internet.

SMC (http://www.smc.com)

SMC2404WBR – Barricada Turbo 11/22Mbps Wireless Cable/DSL Broadband Router

SMC7004VBR – Barricada Cable/DSL Broadband Router

SMC7004CWBR – Barricada Wireless Cable/DSL Broadband Router

1. Log into your router.

2. After you are logged in, click **NAT** on the left side of the page.

3. Click on **Virtual Server** on the left side of the page.

4. Enter the following information on the page:

Line #1:

Private IP:	Type in the **camera's IP address**, for example: 192.168.0.5 (Look at iView's IP Address LCD display for the last 3 digits of the camera's IP address) Private Port: 80
Type:	TCP
Public Port:	80

Line #2

Private IP:	Type in the **camera's IP address**, for example: 192.168.0.5 (Look at iView's IP Address LCD display for the last 3 digits of the camera's IP address) Private Port: 9001
Type:	UDP
Public Port:	9001

5. Click **Apply** to save the settings. iView should now be configured to work with your router and be accessible from the Internet.

SMC7004AWBR – Barricade 4-port 11Mbps Wireless Broadband Router

1. Log into your router.

2. Click on **Virtual Server** on the left side of the page.

3. Enter the following information on the page:

For ID #1:

Service Port:	80
Private IP:	Type in the **camera's IP address**, for example: 192.168.0.5 (Look at iView's IP Address LCD display for the last 3 digits of the camera's IP address) Enable: Checked in

For ID #2:

Service Port:	9001
Private IP:	Type in the **camera's IP address**, for example: 192.168.0.5 (Look at iView's IP Address LCD display for the last 3 digits of the camera's IP address) Enable: Checked in

4. Click **Save** to save the settings. iView should now be configured to work with your router and be accessible from the Internet.

Appendix B: IP Address, Subnet and Gateway

This section discusses Communities, Gateways, IP Addresses and Subnet masking

Communities
A community is a string of printable ASCII characters that identifies a user group with the same access privileges. For example, a common community name is "public." For security purposes, the SNMP agent validates requests before responding. The agent can be configured so that only trap managers that are members of a community can send requests and receive responses from a particular community. This prevents unauthorized managers from viewing or changing the configuration of a device.

Gateways
Gateway, also referred to as a router, is any computer with two or more network adapters connecting to different physical networks. Gateways allow for transmission of IP packets among networks on an Internet.

IP Addresses
Every device on an Internet must be assigned a unique IP (Internet Protocol) address. An IP address is a 32-bit value comprised of a network ID and a host ID. The network ID identifies the logical network to which a particular device belongs. The host ID identifies the particular device within the logical network. IP addresses distinguish devices on an Internet from one another so that IP packets are properly transmitted.

IP addresses appear in dotted decimal (rather than in binary) notation. Dotted decimal notation divides the 32-bit value into four 8-bit groups, or octets, and separates each octet with a period. For example, 199.217.132.1 is an IP address in dotted decimal notation.

To accommodate networks of different sizes, the IP address has three divisions – Classes A for large, B for medium and C for small. The difference among the network classes is the number of octets reserved for the network ID and the number of octets reserved for the host ID.

Class		Network ID	Host ID	Number of Hosts
A	1-126	First octet	Last three octets	16,387,064
B	128-191	First two octets	Last two octets	64,516
C	192-223	First tree octets	Last octet	254

Any value between 0 and 255 is valid as a host ID octet except for those values the InterNIC reserves for other purposes

Value	Purpose
0.255	Subnet masking
127	Loopback testing and interprocess communication on local devices
224-254	IGMP multicast and other special protocols.

Subnetting and Subnet Masks
Subnetting divides a network address into sub-network addresses to accommodate more than on physical network on a logical network.

For example:
A Class B company has 100 LANs (Local Area Networks) with 100 to 200 nodes on each LAN. To classify the nodes by its LANs on one main network, this company segments the network address into 100 sub-network addresses. If the Class B network address is 150.1.x.x, the address can be segmented further from 150.1.1.x through 150.1.100.x

A subnet mask is a 32-bit value that distinguishes the network ID from the host ID for different sub-networks on the same logical network. Like IP addresses, subnet masks consist of four octets in dotted decimal notation. You can use subnet masks to route and filter the transmission of IP packets among your sub-networks. The value "255" is assigned to octets that belong to the network ID, and the value "0" is assigned to octets that belong to the host ID.

For the example above, if you want all the devices on the sub-networks to receive each other's IP packets, set the subnet mask to 255.255.0.0. If you want the devices on a single sub-network only to receive IP packets from other devices on its own sub-network, set the subnet mask to 255.255.255.0 for the devices on the sub-network.

Subnet Mask	Routing and Filtering
0.0.0.0	IP packets are transmitted to all devices.
255.0.0.0	IP packets are only transmitted to devices that are IP that's first octet matches the sender's IP address's first octet.
255.255.0.0	IP packets are only transmitted to devices that are IP that's first two octets match the sender's IP address's first two octets.
255.255.255.0	IP packets are only transmitted to devices that are IP that's first three octets match the sender's IP address's first three octets.

Appendix C: Glossary

The Glossary section defines the terms used in this User's Manual

Term	Definition
Ethernet	Local Area Network technology, originally developed by Xerox Corporation, can link up to 1,024 nodes in a bus network. Ethernet provides raw data transfer in a rate of 10 megabits/sec. with actual throughputs in 2 to 3 megabits/sec. using a baseband (single-channel) communication technique. Ethernet uses carrier sense multiple access collision detection (CSMA/CD) that prevents network failures when two devices attempt to access the network at the same time LAN hardware manufacturers use Ethernet protocol; their products may not be compatible.
Gateway	A computer that attaches to a number of networks and routes packets between them. The packets can be different protocols at the higher levels.
IP	Internet Protocol – The TCP/IP standard protocol defines the IP datagram as the unit of information passed across a network.
IP Address	Internet Protocol Address – A 32-bit address assigned to hosts participating in a TCP/IP network. The IP address consists of network and host portions. It is assigned to an interconnection of a host to a physical network.
MAC	Medium Access Control - The network layer between the physical and the data link layers. Specifically, the physical (hardware) address exists in this layer.
MIB	Management Information Base – The database, i.e. set of variables maintained by a gateway running SNMP.
NMS	Network Management Station
OID	Object Identifier – The variables defined in a MIB
Router	A computer that manages traffic between different network segments or different network topologies. It directs the destination IP address. The network media can be different, but the higher-level protocols must be the same.
SNMP	Simple Network Management Protocol – A standard protocol used to monitor IP hosts, networks, and gateways. SNMP defines a set of simple operations that can be performed on the OIDs of the MIBs managed by the monitored Agents. It employs the UDP/IP transport layer to move its object between the Agents and the NMS.
TCP/IP	Transmission Control Protocol/ Internet Protocol – A protocol suite used by more than 15 million users with a UNIX association and widely used to link computers of different kinds.